

SAFRONOVA, V.A., otv.red.; SHUROV, S.I., red.; BASHLAVINA, O.N., red.;  
VORONINA, A.N., red.; GUREVICH, I.V., red.; ZASLAVSKIY, I.I.,  
red.; KOZLOV, P.M., red.; LARIN, D.A., red.; RAUSH, V.A., red.;  
SAMOYLOV, I.I., red.; SLADKOVA, Ye.A., red.; STROYEV, K.F., red.;  
SCHASTNEV, P.N., red.; TUTOCHKINA, V.A., red.; ERDEL', V.G., red.;  
DYUZHIEVA, A.M., red.kart; POLYANSKAYA, L.A., red.kart

[Geographical atlas of the U.S.S.R. for the seventh grade] Geogra-  
ficheskii atlas SSSR dlia 7-go klassa. Moskva, 1958. (MIRA 1:5)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i karto-  
grafii. 2. Nauchno-redaktsionnaya kartosostavitel'skaya chast'  
Glavnogo upravleniya geodezii i kartografii Ministerstva vnutrennikh  
del SSSR (for all except Dyuzheva, Polyanskaya).  
(Atlases)

ZASLAVSKIY, I.I.

MEKLER, M.M., otvetstvennyy red.; BASHLAVINA, G.N., red.; VORONINA, A.N., red.;  
GUREVICH, I.V., red.; ZASLAVSKIY, I.I., red.; KOZLOV, F.M., red.;  
LARIN, D.A., red.; RAUSH, V.A., red.; SAMOYLOV, I.I., red.;  
SLADKOVAYA, Ye.A., red.; STROLEV, K.F., red.; SHCHASTNEV, P.N., red.;  
TUTOCHKINA, V.A., red.; SHUROV, S.I., predsedatel', red.; ERDELI,  
V.G.

[Geographical atlas for the fifth grade] Geograficheskii atlas dlia  
5-go klassa, Moskva [1957] 16 p. (MIRA 11:7)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i  
kartografii.  
(Maps)

ZASLAVSKIY, I.I.

GERASIMOVA, Tat'yana Pavlovna; ZASLAVSKIY, I.I., red.; GALKIN, P.D., red.;  
TARASOVA, V.V., tekhn. red.

[Methods of teaching an elementary course in physical geography in  
the fifth grade] Metodika prepodavaniia nachal'nogo kursa fizi-  
cheskoi geografii v 5 klassse. Moskva, Izd-vo Akad. pedagog. nauk  
RSFSR, 1958. 335 p. (NIIA 11:7)

(Physical geography—Study and teaching)

SAFRONOVA, V.A., otv.red.; SHUROV, S.I., red.; BASHLAVINA, G.N., red.;  
VORONINA, A.N., red.; GUREVICH, I.V., red.; ZASLAVSKII, I.I., red.;  
KOZLOV, F.M., red.; LARIN, D.A., red.; RAUSH, V.A., red.; SAMOLOVA,  
I.I., red.; SLADKOVA, Ye.A., red.; STROYEV, K.F., red.; SCHASTHEV,  
P.N., red.; TUTOCHKINA, V.A., red.; ERDELI, V.G., red.; DIUZHEVA,  
A.M., red.kart; POLYANSKAYA, L.A., red.kart

[Geographical atlas of the U.S.S.R. for the seventh grade] Geogra-  
ficheskii atlas SSSR dlia 7-go klassa. Moskva, 1960. 31 col.maps.  
(MIRA 14:3)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i karto-  
grafii.

(Russia--Maps)

17(16)

SOV/177-58-11-45/50

AUTHOR: Zaslavskiy, I.Ya., Lieutenant-Colonel of the Medical Corps

TITLE: LOR-Examination (Laringo-oto-rhinological) of Flight Personnel in Hypacusis

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 11, p 89  
(USSR)

ABSTRACT: A flight crew member with hearing defects was investigated by the method of whispering words according to V.I. Voyacheck's table (bass and treble frequency characteristic). The observations showed that the words of the treble group are to be used more differentiated thus making it possible in the units not only to detect defects of the ear, but also to ascertain the character of frequently latently developing bariacusia in flight personnel.

Card 1/1

ZASIAVSKIY, I.Ye., podpolkovnik meditsinskoy sluzhby

Bioquinol for treating tonsillitis patients in military units.  
Voen.-med.shur. no.10:69 O '56. (MLRA 10:3)  
(BISMUTH COMPOUNDS) (TONSILS--DISEASES)

SOKOLOV, V.M. Prinimal uchastiye MYSHETSKAYA, Ye.N.; SHUROV, S.I.,  
red.; BASHLAVINA, G.N., red.; EIBIK, A.Ye., red.;  
ZASLAVSKIY, I.I., red.; KONDRAT'YEV, B.A., red.; MYASISHCHEVA,  
~~Ie.I.~~, red.; SOLEV'YEV, A.I., red.; STROYEV, K.F., red.;  
SCHASTNEV, P.II., red.; TANANKOVA, A.I., red.; TEREKHOV, N.M.,  
red.; LOBZOVA, N.A., red.

[Atlas of Moscow Province] Atlas Moskovskoi oblasti. Moskva,  
1964. 12 p. (MIRA 18:3)

l. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i  
kartografii.

*BC**A1*

Volume changes in reactions of neutralization.  
I. L. RABAEVICH and I. G. SVERDLOV (J. Russ. Phys. Chem. Soc., 1897, 25, 653-654).—In the neutralization of sodium or potassium hydroxide solutions the volume of the system reaches a maximum at neutrality. While for a sulfuric solution the volume is minimal at this point. In the former case the magnitude of the volume change attains a maximum for 0-10% equivalents, but in the latter it increases linearly with concentration. For a 4% iron concentration of 40441 the magnitude of the volume change is connected with the dissociation constant of the acid used. The volume changes observed vary within the limits -5 to +6.5%. R. TAKEMOTO.

## ASB-YLA METALLURGICAL LITERATURE CLASSIFICATION

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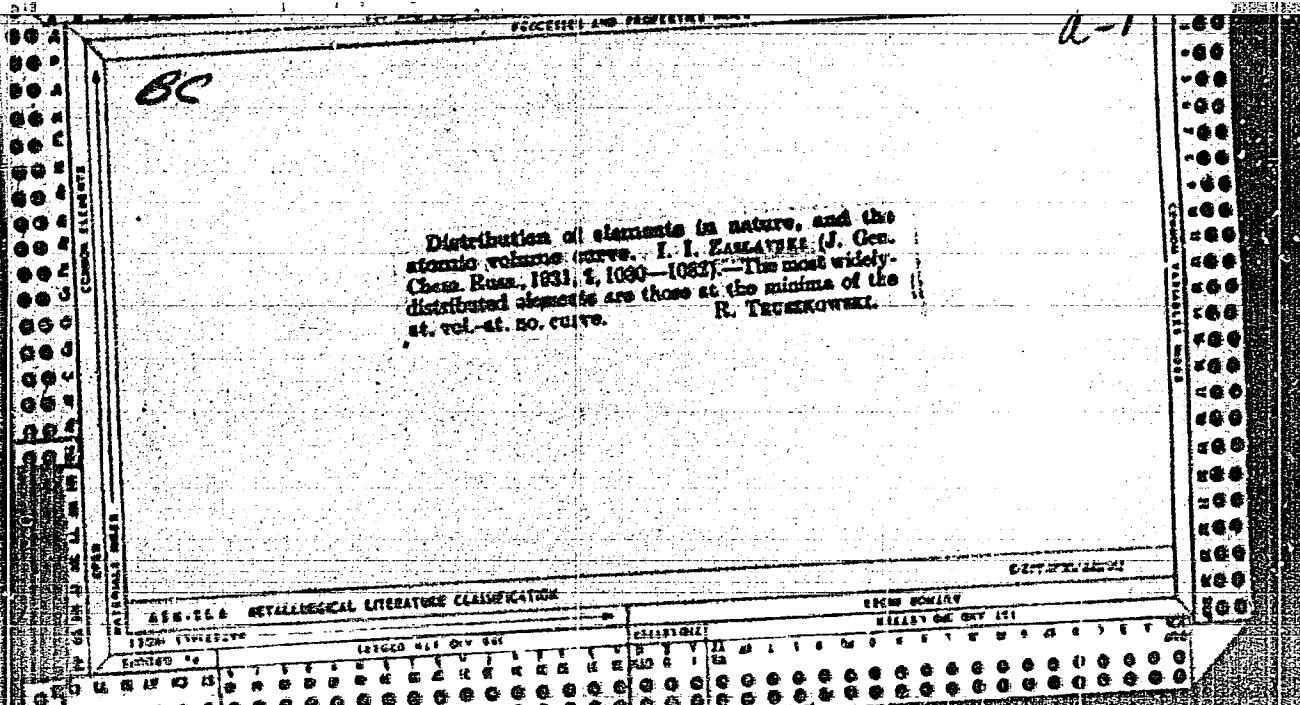
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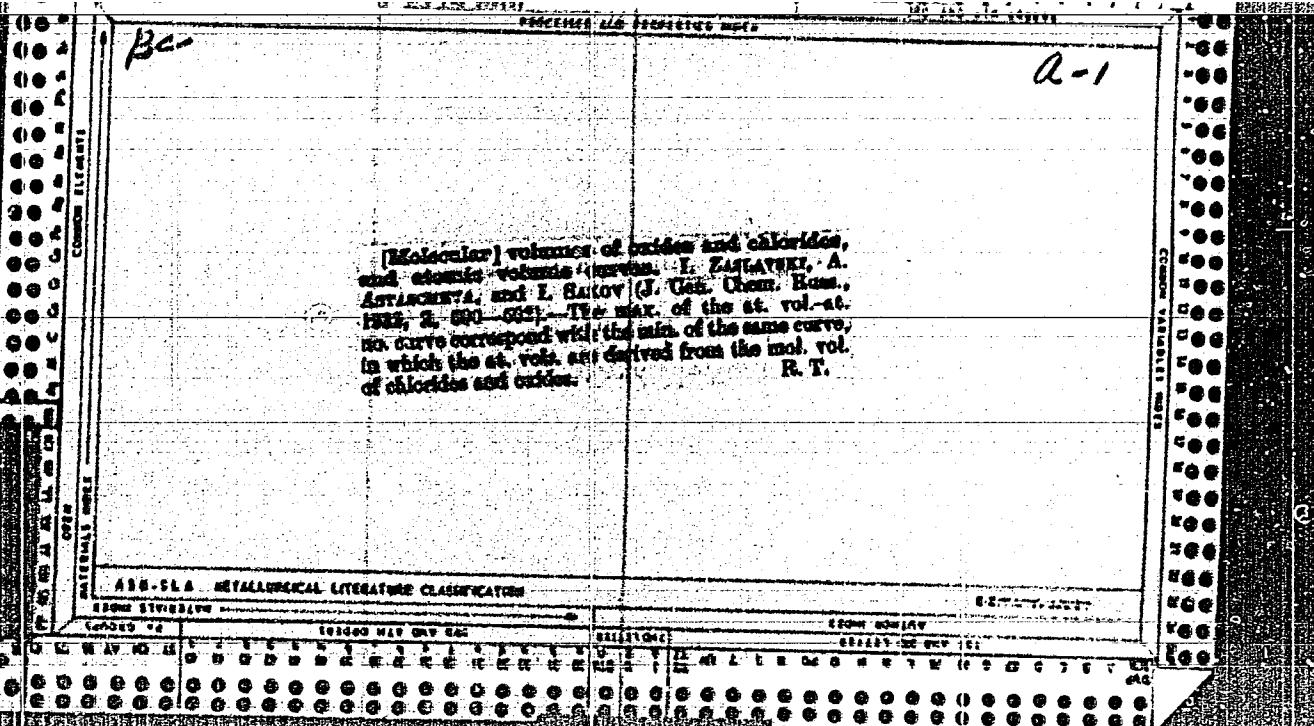
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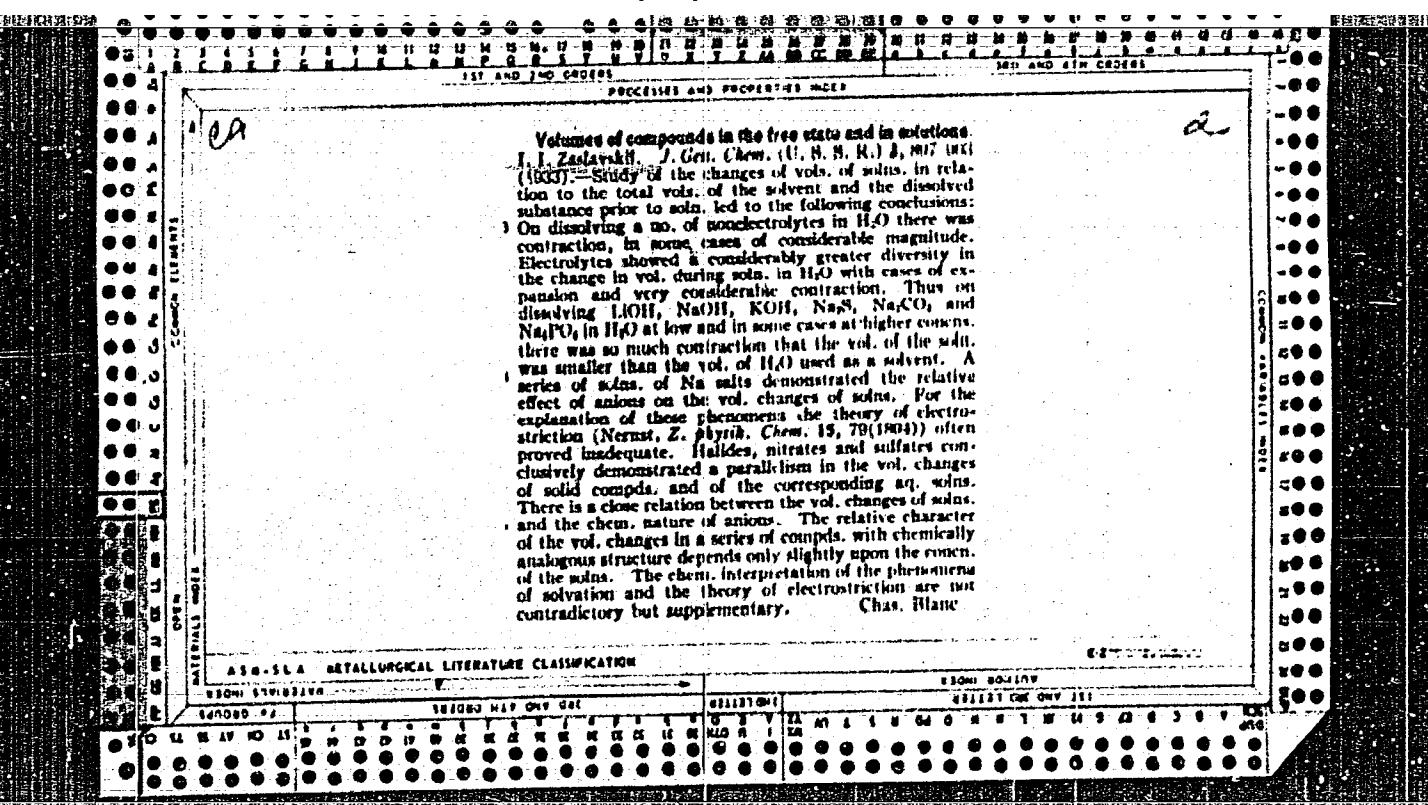
CLASSIFIED ONE ONLY ONE

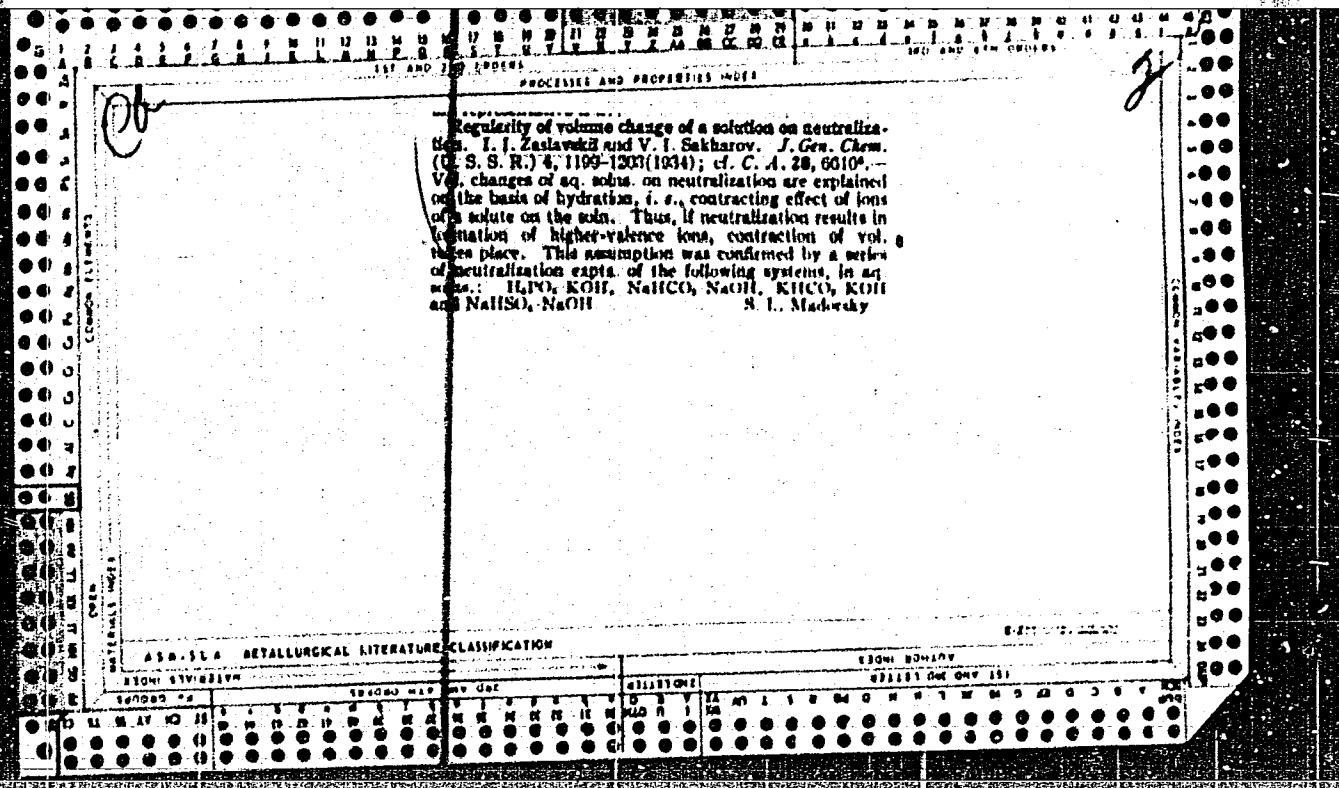
SEARCHED MIP ONLY ONE

RELATION

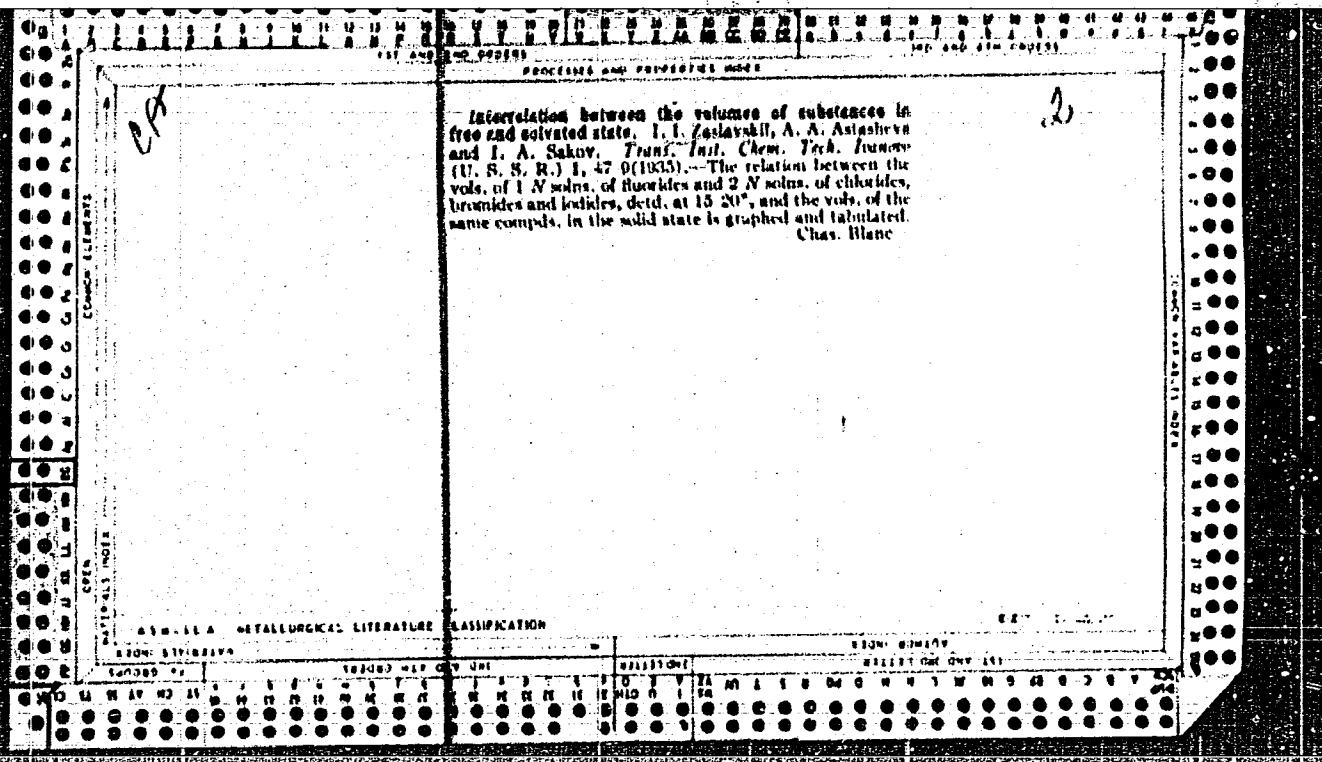








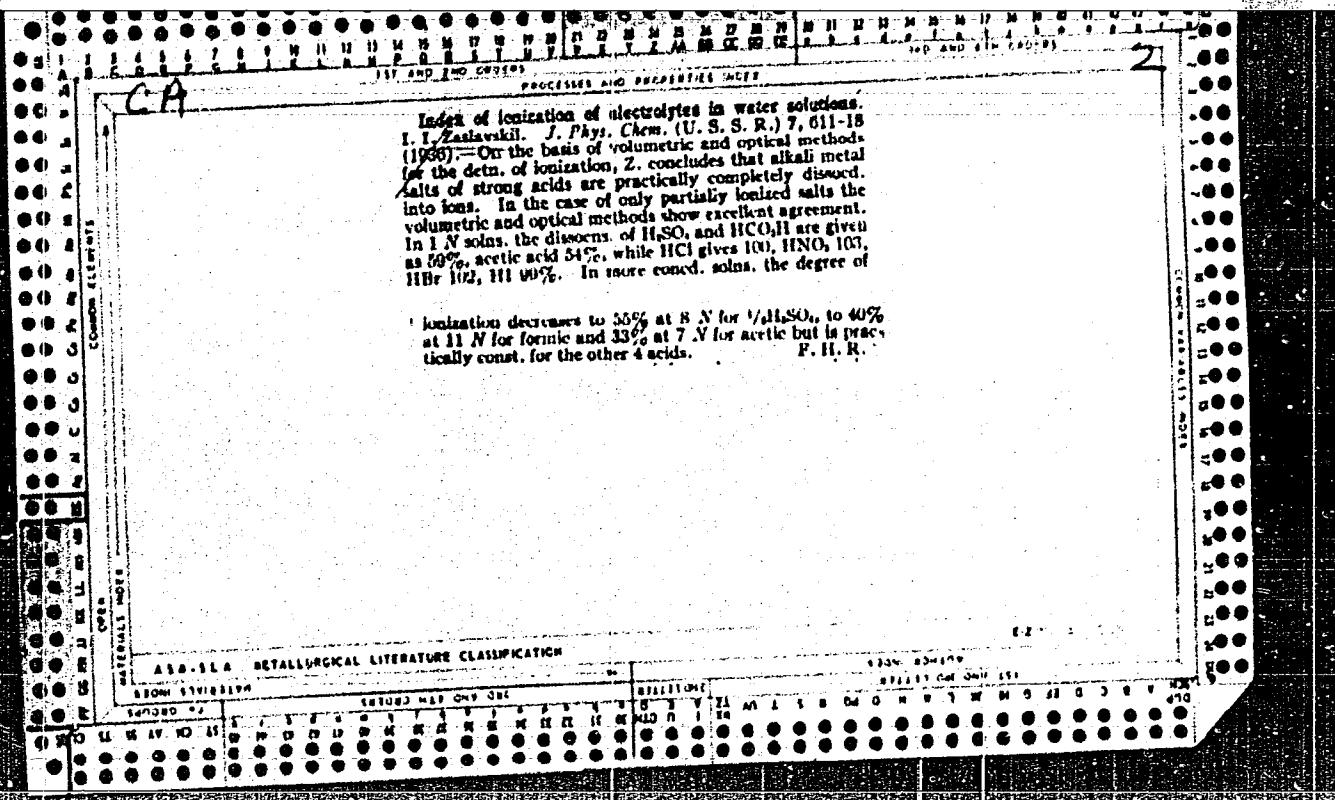
GENERAL INFORMATION		PROCESS AND PROPERTIES INDEX	
<p><i>Ch</i></p>		<p>General characteristics of the volume change during solution in solvents. I. I. Zaslavskii. <i>J. Phys. Chem.</i> <i>U. S. S. R.</i> 8, 1440-((1934); cf. <i>C. A.</i> 29, 3570).— When equal vols. of salt, acid and other solns. taken in unequal mol. concns. are mixed, as a rule the phenomenon of contraction is observed. This contraction reaches a min., or may even pass over into an expansion at a definite, ordinarily very simple, relation between the mol. concns. of the original solns. If no mixing solns. of cor- responding concns. no expansion is observed, the absence of complex formation is indicated. Expansion on mixing solns. is a sign of complex formation. The presence or absence of expansion on mixing of salt and corresponding acid solns. shows the presence or absence of acid salts in the final soln.</p> <p>Risto Hanninen</p> <p>2</p>	
ASA-SEA METALLURGICAL LITERATURE CLASSIFICATION			
FROM SUBJECTIVE		TO OBJECTIVE	
TOPIC	SUBJECTIVE	OBJECTIVE	CLASSIFICATION
DURABILITY	IRON & STEEL	MATERIALS	IRON & STEEL
MANUFACTURE	INDUS. & MACH.	INDUS. & MACH.	INDUS. & MACH.
TESTING	TESTING	TESTING	TESTING
STANDARDS	STANDARDS	STANDARDS	STANDARDS



ZASLAWSKIJ, I.I.

"Sur la theorie des equilibres ionique dans les solutions". Zaslawsij, I.I. (p. 1470)

SO: Journal of General Chemistry. (Zhurnal Obshchei Khimii) 1936, Vol. 6, No. 10



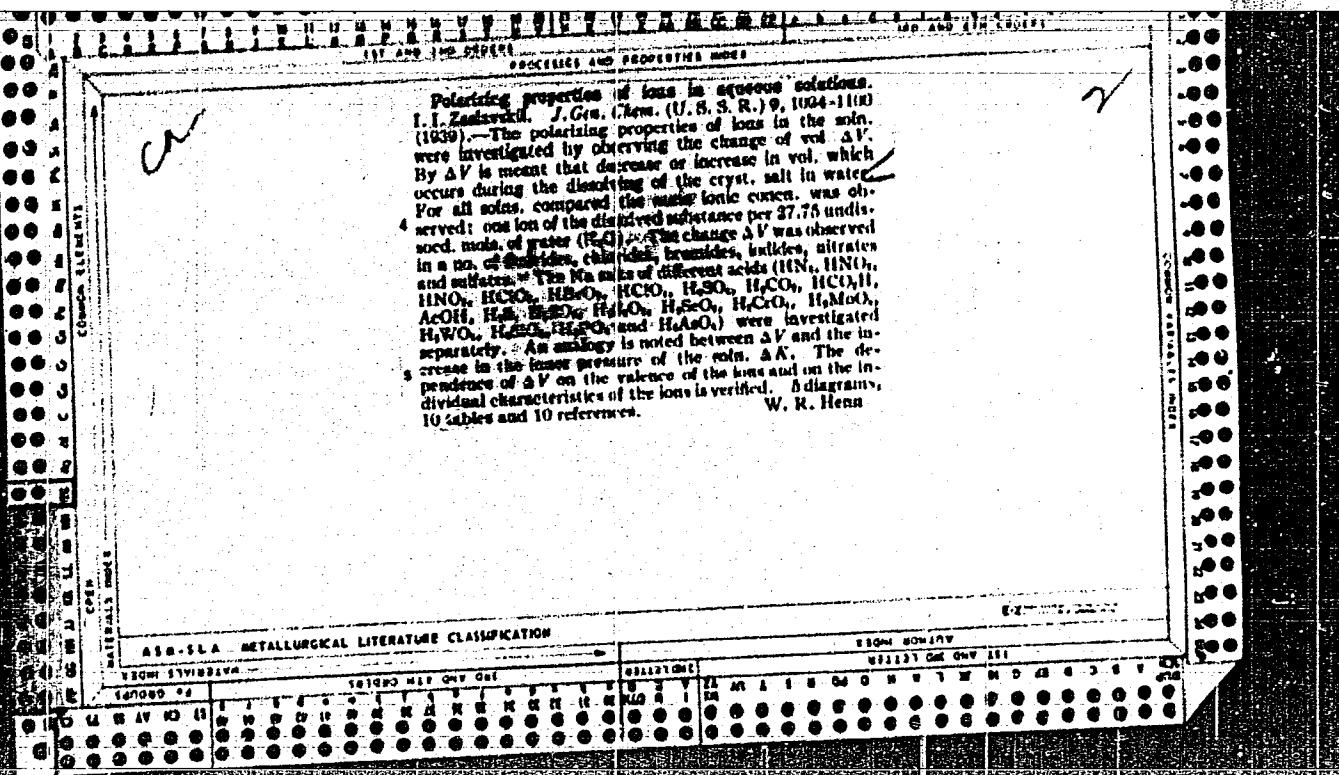
*BC**A-1*

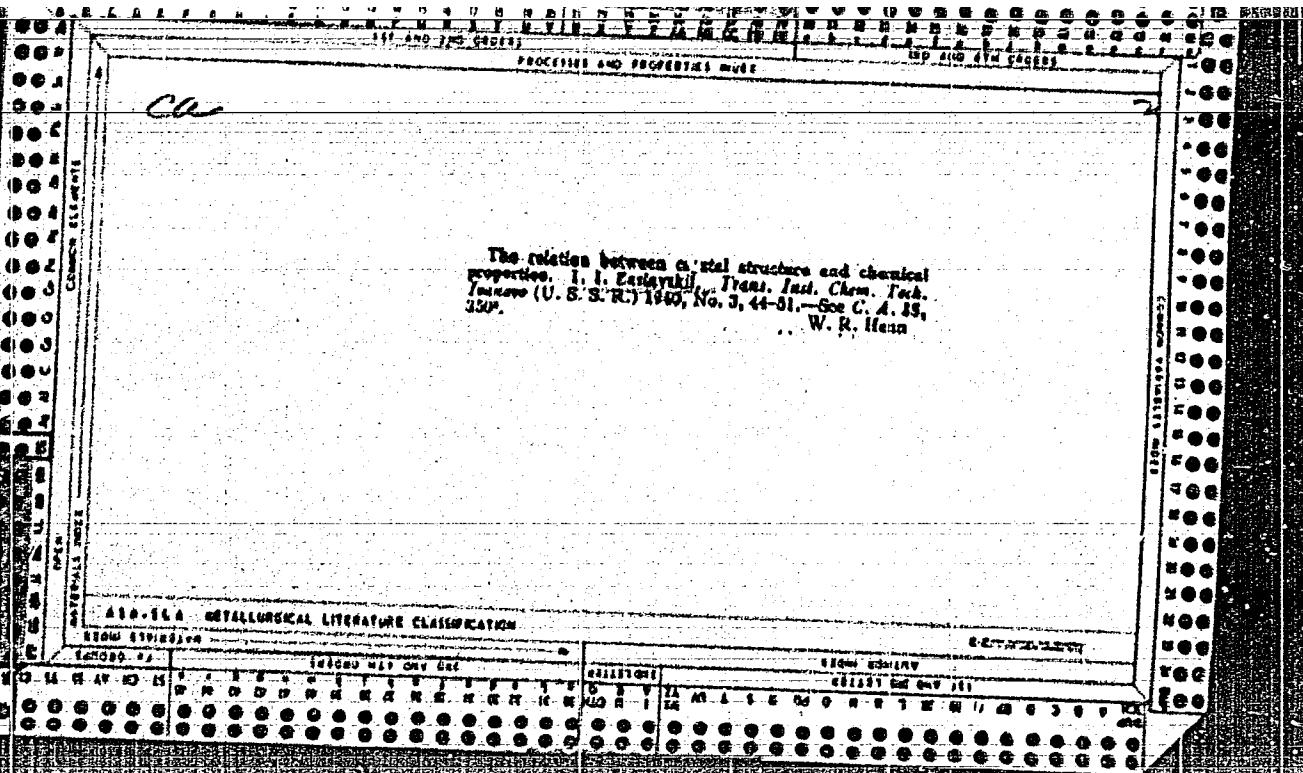
Molecular volumes in crystallo-chemistry.  
I. I. ZAKLAVSKI (J. Gen. Chem. Russ., 1938, 8, 1008--  
1021).—The distance  $d$  between the atoms of crystals  
is expressed by  $d = k(r/a)$ , where  $k = 1.324$  for  
metals and inert gases, 0.9—1.2 for semi-metals (Si,  
(Ge, As, Sb, Sn, etc.), 0.3—0.6 for metalloids (H, N, O,  
P, S, Cl, etc.), and 1.045—1.210 for various cryst.  
types,  $r$  is the mol. or at. vol., and  $a$  is the no. of atoms  
in the mol. The crystal type of series of salts is a  
function of  $r$ , changing from one type to another when  
 $r$  exceeds a certain crit. val. Salts having a crit. val.  
of  $r$  tend to exhibit polymorphism. R. T.

## AIP-SLA METALLURGICAL LITERATURE CLASSIFICATION

Polarizing properties of ions in aqueous solutions. I. I. Zaslavskii. *J. Gen. Chem. (U. S. S. R.)*, 9, 1004-1110 (1939).—The polarizing properties of ions in the soln. were investigated by observing the change of vol.  $\Delta V$ . By  $\Delta V$  is meant that decrease or increase in vol. which occurs during the dissolving of the cryst. salt in water. For all salts, compared the water ionic excha., was observed; one ton of the dissolved substance per 27.75 undissed. mols. of water ( $M_w$ ). The change  $\Delta V$  was observed in a no. of anhydrides, chlorides, bromides, iodides, ultrates and sulfates. The Na salts of different acids ( $H_3N$ ,  $H_4N$ ,  $HNO$ ,  $HClO$ ,  $HBrO$ ,  $HIO$ ,  $H_2SO_4$ ,  $H_2CO_3$ ,  $HClO_4$ ,  $H_2O_2$ ,  $H_2CrO_4$ ,  $H_2MoO_4$ ,  $H_2WO_4$ ,  $H_2SiO_4$  and  $H_2AsO_4$ ) were investigated separately. An analogy is noted between  $\Delta V$  and the increase in the lower pressure of the soln.  $\Delta A$ . The dependence of  $\Delta V$  on the valence of the ions and on the individual characteristics of the ions is verified. A diagram, 10 tables and 10 references.

W. R. Heaton





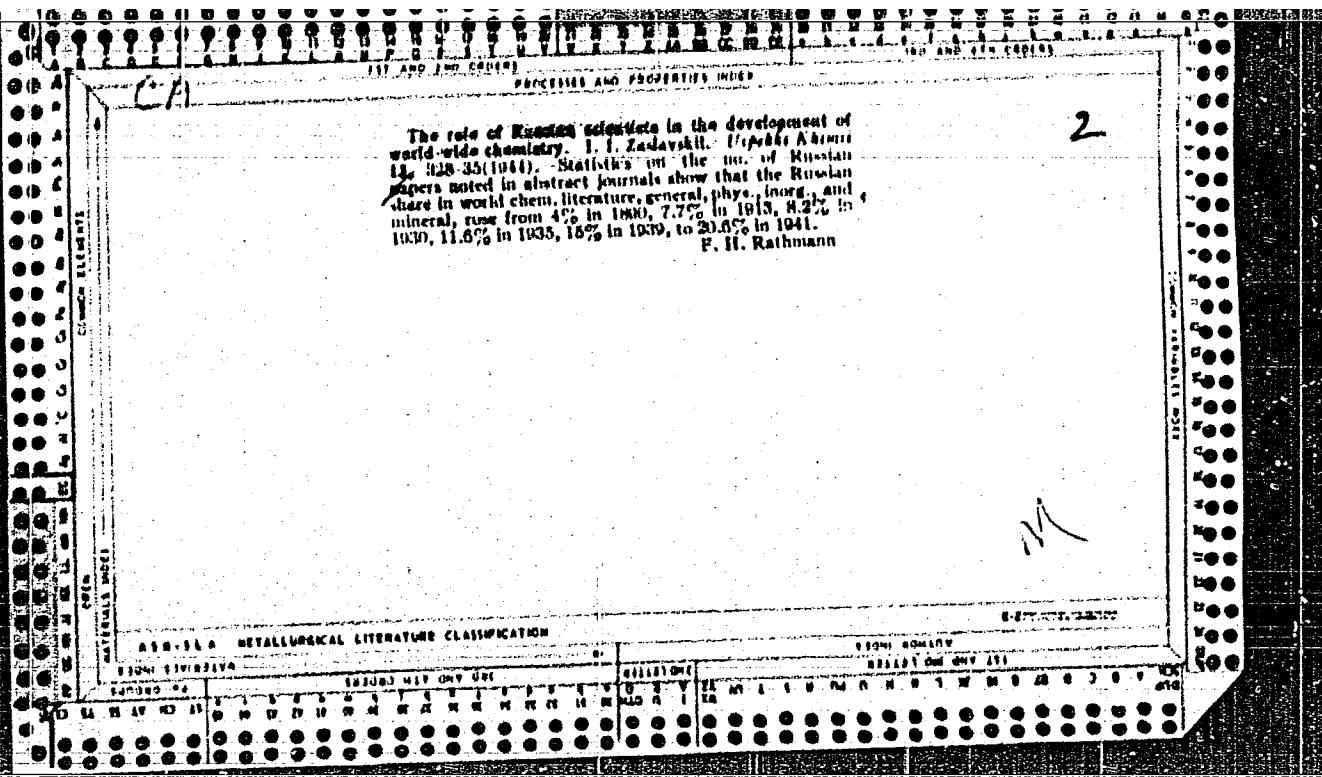
*Dependence of crystalline structure upon chemical properties.* I. I. Zadavil'k. *J. Gen. Chem. (U. S. S. R.)* 10, 360-72 (1940); cf. *C. A.* 33, 4844, 8086<sup>a</sup>. — The following rule was found for all halides, sulfides, selenides, tellurides, nitrides, phosphides, arsenides, antimonides and bismuthides that have the cryst. structure of the NaCl, NiAs or ZnS (wurtzite) type: if the compds. of any of these groups are arranged in increasing order of their mol. vol. then (1) all compds. of the NiAs type precede those of the NaCl type and (2) the value of abv. "contraction" of any compd. of the ZnS type is higher than that of any preceding member of the series of the NiAs or NaCl types. Data are tabulated for 141 compds. of the above types. A, A, P,

Dnipro Chern.-Tech. Inst.

## ASIAN METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8"



*EE*

New methods of volume analysis of solid and liquid systems. O. M. Voronenskaya and L. I. Zastavitskaya. (Chem. Technol. Inst., Ivanov). J. Gen. Chem. (U.S.S.R.) 16, 1189-98 (1946) (in Russian).—In the analysis of systems by the change of vol. in terms of compn., it is found convenient to define an "atomic concn."  $A = 1000 \frac{n}{M}$  where  $n$  = no. of atoms in the mol.,  $d$  = sp. gr.,  $M$  = mol. wt.;  $AN$  where  $N$  = Avogadro's no. gives the no. of atoms per 14 for real solid bodies.  $A$  varies from 14 to 316. In binary solid or liquid systems, if the concn. is expressed in vol. %,  $A$  of the mixt. is a linear function of concn.; deviations therefrom always indicate chem. interaction, the degree of which is measured by  $\Delta A$ , the excess of the actual  $A$  of the system over that following from straight additivity. In numerous in-

stances,  $\Delta A$  has a max. at the compn. corresponding to a well-defined chem. compd., e.g.,  $\text{PhNHMe.C}_6\text{H}_5\text{CSN}_2\text{Na-Hg}$  (at  $\text{NaI}_{1/2}$ ); in  $\text{FeS}_2\text{-FeS}_3$ ,  $\Delta A$  is neg., max. at the concn.  $\text{FeS}_2$  corresponding approx. to natural pyrrhotite. In various binary aqu. systems,  $\Delta A$  was found to have maximum at:  $\text{EtOH.}3\text{H}_2\text{O}, 2\text{H}_2\text{O}$ ,  $\text{H}_2\text{O}_2\text{.}2\text{H}_2\text{O}$ ,  $\text{HClO.}2\text{H}_2\text{O}$ ,  $\text{Ni(H}_2\text{O)}_6\text{.H}_2\text{O}$ ,  $\text{KHSO}_4\text{.}2\text{H}_2\text{O}$  (at 20, 40, and 60°). In  $\text{H}_2\text{SO}_4\text{-SO}_3$ , there is a max. at  $\text{H}_2\text{SO}_3$ . Plots of  $A$  of solns. against the no.  $s$  of solvent mol. (per 1 mol. of solute) show a steady rise (or fall) of  $A$  with  $s$ , mostly approaching asymptotically the value for the pure solvent but sometimes exceeding it; for solid hydrates ( $\text{Na}_2\text{B}_4\text{O}_7\text{.}10\text{H}_2\text{O}$ ,  $\text{NaAlPO}_4\text{.KCr(SO}_4)_2\text{.LiI}$ ) and ammhydrates ( $\text{AlCl}_3\text{.AlBr}_3$ ,  $\text{Al}_2\text{I}_6$ ,  $\text{InCl}_3$ ,  $\text{InI}_3$ ,  $\text{CoCl}_3$ ),  $A$  rises steadily and regularly with the no. of  $\text{H}_2\text{O}$  or  $\text{NaI}$  added. From the study of the  $A$ -concn. diagrams, literature data of sp. gr. of solids were in a few cases recognized as erroneous and the correct values predicted and later confirmed; thus,  $\text{Na}_2\text{CO}_3\text{.H}_2\text{O}$ ,  $A$  162, d. 2.23 (instead of 1.88);  $\text{CoCl}_3\text{.H}_2\text{O}$ ,  $A$  153, d. 2.08 (1.92);  $\text{NiSO}_4\text{.H}_2\text{O}$ ,  $A$  150, d. 2.40 (1.98). N. Tch.

415.10 METALLURGICAL LITERATURE CLASSIFICATION									
THERM. STABILITY STABILIZERS FACILITATORS									
SELECTED MET. CONCNS.									
EXPLANATION									
1	2	3	4	5	6	7	8	9	10
M	H	T	M	K	M	K	M	K	C
A	B	C	D	E	F	G	H	I	J
L	M	N	O	P	Q	R	S	T	U

415.10 METALLURGICAL LITERATURE CLASSIFICATION									
EXPLANATION									
SELECTED MET. CONCNS.									
1	2	3	4	5	6	7	8	9	10
M	H	T	M	K	M	K	M	K	C
A	B	C	D	E	F	G	H	I	J
L	M	N	O	P	Q	R	S	T	U

ZASLAVSKIY, I.I.

Yatsimirskiy, K.B. and Zaslavskiy, I.I. "Classification of diagrams  
in volumetric analysis of liquid double systems," (reference), Soobshch.  
o nauch. rabotakh chlenov Vsesoyuz. khim. o-va im. Mendeleyeva, 1948,  
Issue 2, p. 23

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

cf., C. A., 43, 2326.—For ideal binary systems, the  $d_1$  and the  $d_2$ , concn. (total no. of g. atoms in 1 l.),  $A_1$  are additive if the compn. is expressed in vol. %; thus,  $d_1 = d_1 V_1 + d_2 V_2$  and  $A_1 = A_1 V_1 + A_2 V_2$ . In real systems, the deviations  $\Delta A$  and  $\Delta d$  of the real  $A$  and  $d$  from the ideal  $A_1$  and  $d_2$  are related by  $\Delta A / dV_1 = \Delta d / (dV_1)$ ;  $(A_1 - A) = (\Delta A / d)(dV_1 / dA_1)$ . It follows from this expression that  $\Delta A$  and  $\Delta d$  can have extreme values at the same point only if  $dV_1 / dA_1 = d\Delta d / d\Delta A$ , where  $d = \text{mol. wt.} = N_A \cdot \text{no. of atoms in the mol.}$ , and, further, that the max. of  $\Delta A$  will be shifted, relative to the max. of  $\Delta d$ , in the direction of the component with the smaller "mean at. wt."  $M/n$ . By an analogous consideration, the contraction  $C$  and  $\Delta d$  can have an extreme value at the same point only if the sp. grs. of the 2 components are equal; in the general case, the max. of  $C$  is shifted, relative to the max. of  $\Delta d$ , in the direction of the component of lower sp. gr.  $\Delta A$  and  $C$  have an extreme value at the same point only if  $A_1 = A_2$ ; in the general case, the max. of  $\Delta A$  is shifted, relative to the max. of  $C$ , in the direction of the component of higher  $A$ . As an illustration,  $H_2SO_4 + H_2O$ , at 30%, has a max. of  $\Delta A$  at 73 wt. %  $H_2SO_4$ ,  $C$  at 78%;  $\Delta d$  at 60%;  $HNO_3 + H_2O$ , at 20% max.  $\Delta A$  at 54%;  $C$  at 55%;  $\Delta d$  at 60 wt. %  $HNO_3$ ;  $EtOH + H_2O$ , at 18% max.  $\Delta A$  at 46,  $C$  at 66-49,  $\Delta d$  at 42 wt. %  $EtOH$ . In all 3 cases, the max. of  $\Delta A$  corresponds to a rational compn.; thus, resp.,  $H_2SO_4 \cdot 2H_2O$  (between 0 and 100%),  $HNO_3 \cdot H_2O$  (between 5 and 30%),  $EtOH \cdot 2H_2O$  (between 10 and 40%), whereas the positions of the max. of  $C$  and of  $\Delta d$  are irrational.

N. THOMAS

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CIA-RDP86-00513R001963910013-8"

ZASLAVSKIY, I. I.

Zaslavskii, I. I., "The study of binary liquid systems by the volumetric method." p. 732.  
The absolute value ( $\Delta A$ ) for the solution of one and the same concentration regularly drops with increase in temperature. The absolute value of the maximum ( $\Delta A$ ) in the ethyl alcohol is much smaller than it was in water solutions of sulfuric and nitric acid. Therefore, one can assume that the hydrate  $C_2H_5OH \cdot 3H_2O$  is dissociated into alcohol and water to a considerable degree.

August 18, 1947

SO: Journal of Applied Chemistry (USSR) 21 No. 7 (1948)

CA

Physicochemical peculiarities in the structure of aquo complexes, and particularly of crystal hydrates. [1].  
Zaslavskii, I. S., Sektsia Platiny i Drugikh Blagorod. Metallov [Eds.]: Osnovy Khimii, Akad. Nauk S.S.R., No. 21, 223-7 (1948). — The atomic concn. ( $\bar{A}$ ) (the atm. number of atoms in 1 l. of the substance, solid or liquid) is based on Avogadro's number. Where there is no chem. interaction between solute and solvent,  $\bar{A}$  is a linear function of compn. in both liquid and solid solns. Where there is an interaction, a deviation from additivity is observed. In aquo and ammonia systems the interaction with solvent brings about a very considerable increase in  $\bar{A}$ . The more intense the interaction the greater the difference between the actual value and the p.v. value which it would have had the soln. behaved according to additivity rule. The max. value of  $\bar{A}$  coincides with a compn. of a hydrate that corresponds to a stoichiometric relation between the solute and H<sub>2</sub>O, and frequently coincides with the compn. of well-known crystal hydrates, e.g., in the systems C<sub>2</sub>H<sub>5</sub>OH-H<sub>2</sub>O, HNO<sub>3</sub>-H<sub>2</sub>O, H<sub>2</sub>SO<sub>4</sub>-H<sub>2</sub>O, HPO<sub>4</sub>-H<sub>2</sub>O, the max. deviation of  $\bar{A}$  from additivity corresponds to Ca(H<sub>2</sub>O)<sub>8</sub>Cl<sub>2</sub>, HNO<sub>3</sub>(H<sub>2</sub>O)<sub>2</sub>CaCl<sub>2</sub>, and H<sub>2</sub>PO<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub>CaCl<sub>2</sub>, resp. Crystal hydrates behave analogously to liquid solns. with these differences: (1) in solid systems the packing effect of H<sub>2</sub>O is more pronounced, and (2) as the H<sub>2</sub>O of hydration increases,  $\bar{A}$  is constantly increasing. This suggests that in crystal hydrates the crystal lattice changes and the H<sub>2</sub>O determines its structure. M. Hirsch

method. L. I. Zaslavskii, *Zhur. Fizich. Khim.* (J. Appl. Chem.) 21, 782-6 (1948); cf. Vorob'evskaya and Z., *C.A.*, 41, 5686a.—The deviations ( $\Delta$ ) from additivity of the sp. gravity  $\delta$  and of the "atomic excess,"  $A$  (no. of atoms in 1 l. of the mixt.), as a function of the compn. expressed in vol. %, are calc'd. from available data supplemented by a few new data. (1) In  $H_2SO_4 + H_2O$  at 20°,  $\Delta\delta$  is max. at exactly the compn.  $H_2SO_4 \cdot 3H_2O$ ; the plot, however, gives a continuous max., not a single peak; this indicates partial dissociation of the compnd. The position of  $\Delta\delta$  max. remains the same at 0, 20, 40, 60, and 100%, but its height decreases ( $\Delta\delta = 15.47, 14.72, 14.20, 13.95$ , and 13.57, resp.); this probably indicates weakening of the chem. interaction with rising temp. Unlike  $\Delta\delta$ , the max. of  $\Delta A$  does not lie at exactly the compn. of the compnd, but is shifted (relative to the position of  $\Delta\delta$  max.) towards the component with the higher mass at wt. (= mol. wt. divided by the no. of atoms in the mol.), i.e.  $H_2SO_4$ ; thus, at 20°,  $\Delta A$  max. lies at 60 wt. %  $H_2SO_4$ . The max. of compression  $c$  (at 75 wt. %  $H_2SO_4$ ) is shifted (relative to  $\Delta\delta$  max.) towards the com-

ponent with the lower st. concn., i.e.  $H_2O$ . The max. of  $c$  is shifted relative to  $\Delta\delta$  max. in the direction of the component of lower sp. gr., i.e.  $H_2O$ . These shifts are consistent with the theoretical predictions of Yatsimirskii. (2) The same shifts are found in the system  $HNO_3 \cdot H_2O$ . At 0, 20, and 50°,  $\Delta\delta$  is max. at the compn.  $HNO_3 \cdot 3H_2O$ , and has the values  $\Delta\delta = 13.78, 13.14$ , and 12.76, resp. The existence of this hydrate does not appear in curves of other phys. properties, e.g. viscosity. (3) In the system  $H_2O \cdot EtOH$ , at 15 and at 40°,  $\Delta\delta$  is max. ( $\approx 0.05$  at 15°) at the compn.  $EtOH \cdot 3H_2O$ ; the low value of  $\Delta\delta$  max. indicates relatively weak chem. interaction. Owing to the closeness of the mass at. wts. of the 2 components, the max. of  $\Delta\delta$  is only slightly shifted (relative to  $\Delta\delta$  max.) towards  $H_2O$ . Likewise, the max. of  $c$  is only slightly shifted to  $EtOH$ , the shift being somewhat more pronounced at 40° than at 15°. N. Tch.

## 4.9.1.4. METALLURGICAL LITERATURES CLASSIFICATION

ECONOMIC CLASSIFICATION		ECONOMIC CLASSIFICATION	
STANDARD %	TECHNICAL DATA	STANDARD %	TECHNICAL DATA
0.0	0.0	0.0	0.0
0.1	0.1	0.1	0.1
0.2	0.2	0.2	0.2
0.3	0.3	0.3	0.3
0.4	0.4	0.4	0.4
0.5	0.5	0.5	0.5
0.6	0.6	0.6	0.6
0.7	0.7	0.7	0.7
0.8	0.8	0.8	0.8
0.9	0.9	0.9	0.9
1.0	1.0	1.0	1.0
1.1	1.1	1.1	1.1
1.2	1.2	1.2	1.2
1.3	1.3	1.3	1.3
1.4	1.4	1.4	1.4
1.5	1.5	1.5	1.5
1.6	1.6	1.6	1.6
1.7	1.7	1.7	1.7
1.8	1.8	1.8	1.8
1.9	1.9	1.9	1.9
2.0	2.0	2.0	2.0
2.1	2.1	2.1	2.1
2.2	2.2	2.2	2.2
2.3	2.3	2.3	2.3
2.4	2.4	2.4	2.4
2.5	2.5	2.5	2.5
2.6	2.6	2.6	2.6
2.7	2.7	2.7	2.7
2.8	2.8	2.8	2.8
2.9	2.9	2.9	2.9
3.0	3.0	3.0	3.0
3.1	3.1	3.1	3.1
3.2	3.2	3.2	3.2
3.3	3.3	3.3	3.3
3.4	3.4	3.4	3.4
3.5	3.5	3.5	3.5
3.6	3.6	3.6	3.6
3.7	3.7	3.7	3.7
3.8	3.8	3.8	3.8
3.9	3.9	3.9	3.9
4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.1
4.2	4.2	4.2	4.2
4.3	4.3	4.3	4.3
4.4	4.4	4.4	4.4
4.5	4.5	4.5	4.5
4.6	4.6	4.6	4.6
4.7	4.7	4.7	4.7
4.8	4.8	4.8	4.8
4.9	4.9	4.9	4.9
5.0	5.0	5.0	5.0
5.1	5.1	5.1	5.1
5.2	5.2	5.2	5.2
5.3	5.3	5.3	5.3
5.4	5.4	5.4	5.4
5.5	5.5	5.5	5.5
5.6	5.6	5.6	5.6
5.7	5.7	5.7	5.7
5.8	5.8	5.8	5.8
5.9	5.9	5.9	5.9
6.0	6.0	6.0	6.0
6.1	6.1	6.1	6.1
6.2	6.2	6.2	6.2
6.3	6.3	6.3	6.3
6.4	6.4	6.4	6.4
6.5	6.5	6.5	6.5
6.6	6.6	6.6	6.6
6.7	6.7	6.7	6.7
6.8	6.8	6.8	6.8
6.9	6.9	6.9	6.9
7.0	7.0	7.0	7.0
7.1	7.1	7.1	7.1
7.2	7.2	7.2	7.2
7.3	7.3	7.3	7.3
7.4	7.4	7.4	7.4
7.5	7.5	7.5	7.5
7.6	7.6	7.6	7.6
7.7	7.7	7.7	7.7
7.8	7.8	7.8	7.8
7.9	7.9	7.9	7.9
8.0	8.0	8.0	8.0
8.1	8.1	8.1	8.1
8.2	8.2	8.2	8.2
8.3	8.3	8.3	8.3
8.4	8.4	8.4	8.4
8.5	8.5	8.5	8.5
8.6	8.6	8.6	8.6
8.7	8.7	8.7	8.7
8.8	8.8	8.8	8.8
8.9	8.9	8.9	8.9
9.0	9.0	9.0	9.0
9.1	9.1	9.1	9.1
9.2	9.2	9.2	9.2
9.3	9.3	9.3	9.3
9.4	9.4	9.4	9.4
9.5	9.5	9.5	9.5
9.6	9.6	9.6	9.6
9.7	9.7	9.7	9.7
9.8	9.8	9.8	9.8
9.9	9.9	9.9	9.9
10.0	10.0	10.0	10.0

ZASLOVSKII, I. I.

I. I. Zaslovskii and K. B. Iatsimirskii, Unusual points on the curves of properties of binary systems during volumetric analysis, p. 1755

Mathematical analysis has established the following for 2-compound systems by chemical reaction: The maximum deviation of atomic concentrations from the average of calculated value ( $\Delta A$ ) is shifted in regards to the maximum deviation of specific gravity from the average calculated value ( $\Delta d$ ) toward the component with the smaller average atomic weight. The maximum  $\Delta A$  is shifted in regard to the compression maximum C toward the component with the largest atomic concentration. The maximum  $\Delta d$  is shifted in regards to the maximum C toward the component with the largest specific gravity.

Chair of Inorganic Chemistry of the Ivanov Chemico Technological Institute  
July 17, 1947

SO: Journal of General Chemistry (USSR) 28, No. 10 (1948):

ZASLAVSKIY, I. I.

22967 Szhatie pri rastvorenii kislot i spirtov v vone anomaliya szhatiya  
v sisteme azotnaya kislota-voda. Zhurnal obshchey khimii, 1949, Vyp.  
6, C. 995-1001. Bibliogr: C. 1001.

SO: LETOPIS' NO. 31, 1949

ZASLAVSKIY, I. I.

22978 Izuchenije sistemy azotaya kislotá--sernaya--voda volymetriceskimi  
metodami. Zhurnal prikl. Khimii, 1949, No. 7, C. 689-97.  
Bibliogr: C. 697.

SO: LETOPIS' NO. 31, 1949

C.A.

New methods for studying and interpreting volume relations in physicochemical analysis. I. I. Zaslavskii (Volume Chem. Technol. Inst., Ivnovo, U.S.S.R.). Izdat. Naukova Fiz.-Khim. Anal., Inst. Obshchestv i Neorg. Khim., Akad. Nauk S.S.R., No. 19, 213-10 (1949).—A review and summary of previous work by Z. on this topic. M. Hesch

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CIA-RDP86-00513R001963910013-8

The volume contraction of sodium and bleekite during  
solution in water and anomalous contraction in the excess  
nitric acid-water. I. I. Zelenyuk (Ivanov Chem.-Tech.  
Inst.). J. Gen. Chem. U.S.S.R. 19, 953-91 (1949)  
(Engl. translation).—See C.A. 44, 6064. — B. J.

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8"

*CP*

Volume contraction in the solution of acids and also  
bols in water and the contraction anomaly in the system  
acetic acid-water. I. I. Zaslavskii, Zhur. Obshchey  
Khim., 1, Gen. Chem. 7(19), 703-706(1940).—Tabulation  
of data of the vol. contraction  $\delta$  occurring on mixing in  
increasing amounts (in moles) of  $H_2O$  with 1 mole of the pure  
liquid, for  $HClO_4$ ,  $H_2SO_4$ ,  $H_2SO_3$ ,  $AcOH$ ,  $H_3PO_4$ ,  $MgCl_2$ ,  
 $NaCl$ , and glycerol, shows uniform decrease of  $\delta$  with in-  
creasing  $\alpha$  (up to 1.4 moles); the magnitude of  $\delta$ , and the  
rate of its decrease with increasing  $\alpha$ , decrease appr. in  
the given order.  $HNO_3$  presents an anomaly; the curve of  
 $\delta$  as a function of  $\alpha$  passing through a max., situated, at  
 $\alpha = 20$ , and 30%, very close to  $\alpha = 0.2$  mole  $H_2O$ . Strong  
contraction upon addn. of the 1st amts. of  $H_2O$  being  
obviously the rule, the anomalous behavior of  $HNO_3$  in-  
dicates the presence, in the range of 100-90 wt. %  $HNO_3$ ,  
of processes that suppose small, consequently, decrease the

general vol. contraction. Addn. of 1.20 g.  $H_2O$  to 63.02  
 $g.$  pure  $HNO_3$  gives rise, at 20°, to  $\delta = 0.19$  ml., as against  
 $\delta = 0.48$  ml. on addn. of the same amt. of  $H_2O$  to 93%  
 $HNO_3$ . This peculiarity of  $HNO_3$  can be explained in  
terms of transformations of the ions present in pure and in  
highly concn.  $HNO_3$ , the bivalent  $[N(OH)_2]^{++}$  cation  
(formed through  $3HNO_3 \rightarrow [N(OH)_2](NO_3)_2$ ) and the uni-  
valent  $NO_3^-$  cation (formed through  $2HNO_3 \rightarrow [NO_3]^{+}NO_3^-$ ). Mixture with the monohydrated  
 $[NO_3]^{+}NO_3^-$  ion. The successive transformation  
based on progressive diln. are:  $[NO_3]^{+}NO_3^- \rightarrow H_2O +$   
 $NO_3^-$ ;  $H_2O + NO_3^- \rightarrow NO_3^- + H_2O^+$ . Disappearance  
of bivalent cations and their replacement by univalent  
ions is responsible for the weakening of the vol. contraction  
at the 1st stage. This stage is evidently concluded at  
the approx. compn.  $HNO_3:0.2\ H_2O$ , or 95 wt. %  $HNO_3$ .  
This scheme agrees with known facts of the nitrating ability  
of  $HNO_3$ , and with the point of view of Bennett,  
Brand, and Williams (C.A. 41, 1213A) attributing the  
nitrating capacity of  $HNO_3$  to aromatic compds. to the  
 $NO_3^-$  ion. Diln. beyond 95 wt. %  $HNO_3$  weakens  
that nitrating ability, which disappears completely at  
 $HNO_3:H_2O = 1:1$ . However, a dil.  $HNO_3$  retains nit-  
rating ability towards aliphatic compds., this being due  
to  $NO_3^-$  ions (Usanovich, et al., C.A. 34, 7283). On  
the basis of the difference of the vol. contractions of pure  
 $H_2SO_4$  and  $HNO_3$ , one mole of the former giving, with 0.1  
mole  $H_2O$ ,  $\delta = 0.08$  ml., as against 0.19 ml. for  $HNO_3$ , it is  
clear that when highly concn.  $H_2SO_4$  and  $HNO_3$  are mixed,  
the latter will lose its  $H_2O$  to the former. Not so, how-  
ever, in the case of mixing  $H_2SO_4$ ,  $H_2O$  with  $HNO_3$ ,  $H_2O$ :  
diln. of 1 mole of each of these compds. with 0.1 mole  
 $H_2O$  give rise to very nearly the same  $\delta = 0.31$  ml., and,  
correspondingly, mixing of these 2 dil. acids is accompa-  
nied by no significant vol. contraction. At this diln. there  
is no more interaction between the two acids. N. Thon

*CA*

System nitric acid-sulfuric acid-water. O. M. Klimova and I. J. Zaslavskii (Ivanov Chem.-Technol. Inst.), *Zhur. Priklad. Khim.* (J. Applied Chem.) 22, 689-97 (1949). Values of  $d_{40}^{\circ}$  were obtained for the ternary system  $\text{HNO}_3\text{-H}_2\text{SO}_4\text{-H}_2\text{O}$  and for the binary system  $\text{HNO}_3\text{-H}_2\text{SO}_4$ . In the binary system,  $d_{40}^{\circ}$  varies smoothly from 1.4016 for  $\text{H}_2\text{SO}_4$  to a max. of 1.4710 at 18.8 mole %  $\text{HNO}_3$  and down to 1.3130 for  $\text{HNO}_3$ . K. and Z. calcd. the difference between the actual "at. concn." and the av. value, where "at. concn." is calcd. from the mol. concn. on the basis of 3 atoms per mol.  $\text{HNO}_3$  and 7 for  $\text{H}_2\text{SO}_4$ , with intermediate values for solns. of the two compds. Values of  $\Delta d$  thus calcd., when plotted against concn., rise smoothly from 0 for both pure components to a broad max. of 7.76 between 33 and 50 mole %  $\text{HNO}_3$ . This is attributed to the formation of the compds.  $\text{HNO}_3\text{-2H}_2\text{SO}_4$  (or  $(\text{N}(\text{OH})_3^{+})\text{-}(\text{HSO}_4^{-})_2$ ) and  $\text{HNO}_3\text{-H}_2\text{SO}_4$  (or  $(\text{NO}_3^{-})\text{-}(\text{HSO}_4^{-})$ ). The data thus obtained differ somewhat from those of Sapozh-

nikov (Z. phys. Chem. 49, 607 (1944)). The compds. thus formed are not stable in aq. soln. Studies of  $d_{40}^{\circ}$  vs. concn. curves were made with increasing concn. of  $\text{H}_2\text{O}$ ; the max. in the curves disappeared when the concn. of  $\text{H}_2\text{O}$  reached 42.8 mole %. The existence of the cations  $\text{N}(\text{OH})_3^{+}$  and  $\text{NO}_3^{+}$  was also indicated by studies of vol. changes when 0.1 mole  $\text{H}_2\text{O}$  was added to various concns. of  $\text{HNO}_3$  at 20°, compared with the behavior of solns. of  $\text{HClO}_4$  (20°),  $\text{H}_2\text{SO}_4$  (20°),  $\text{H}_2\text{SeO}_4$  (20°),  $\text{AcOH}$  (20°),  $\text{EtOH}$  (20°),  $\text{MeOH}$  (20°), iso- $\text{PrOH}$  (15°), and glycerol (4°). For all the latter compds., the curves of change in vol. (always pos.) vs. concn. always decrease smoothly with increasing amt. of  $\text{H}_2\text{O}$ , in most cases leveling off at 0.23-50 mole %  $\text{H}_2\text{O}$ . With  $\text{HNO}_3$ , however, the change in vol. starts out very small in concn. soln., rises to a max., then levels off at a somewhat smaller value. Approx. values for no. of moles  $\text{H}_2\text{O}$  per mole of solute and changes in vol. for  $\text{H}_2\text{SO}_4$ , for  $\text{AcOH}$ , and for  $\text{HNO}_3$ , resp., are: 0.0, 0.98, 0.45, 0.19; 0.1, 0.36, 0.37; 0.13; 0.2, 0.72, 0.39, 0.43; 0.4, 0.62, 0.20;

0.40; 1.0, 0.40, 0.12, 0.34. The interpretation of the  $\text{HNO}_3$  curve is that the initial increase in vol. change is due to the formation of the ion  $\text{N}(\text{OH})_3^{+}$ , and in more dil. solns. the ion  $\text{NO}_3^{+}$  is formed by the reaction  $\text{NO}_3^{-} + \text{H}_2\text{O} \rightarrow \text{HO}^{+} + \text{NO}_3^{+}$ . The relation of these ions and compds. to such processes as nitration reactions is considered.

Arild J. Miller

24

2

**Classification of diagrams in volume analysis of liquid binary systems.** K. B. Yatsimirskii and I. I. Zaslavskikh (Ivanovo Chem. Technich. Inst.), Zhur. chesk. Khim. (J. Gen. Chem.) 30, 301 (1950).—Diagrams of the atom.  $A$  as a function of the compn. are of 4 types: In ideal systems of noninteracting liquids of unchanging degree of assoc.,  $A$  is a linear function of the compn., and the deviation  $\Delta A$  from additivity is zero throughout. In systems with one associat. component which, in soln., dissociates into simpler units, the curve of  $\Delta A$  is convex to the axis of compn., and  $\Delta A$  is always neg. In systems where the components form chain compds.,  $\Delta A$  is concave to the axis of the compn. In systems involving both compd. formation and dissociat. of one or both assoc. components, the  $\Delta A$  curve is slightly convex to the axis of assoc.; the abs. values of  $\Delta A$  are relatively low, and the max. of  $\Delta A$  may not correspond to the compn. of the compnd. Examples of ideal systems are  $\text{H}_2\text{O}-\text{AcOH}$ ,  $\text{C}_2\text{H}_5-\text{CCl}_4$ ,  $\text{C}_2\text{H}_5-\text{PhH}$ ,  $\text{AcOEt}-\text{HCOEt}$ ,  $\text{C}_2\text{H}_5-\text{PhCl}$ ,  $\text{C}_2\text{H}_5-\text{PhMe}$ ,  $\text{CCl}_4-\text{PhMe}$ ,  $\text{C}_2\text{H}_5-\text{CH}_3\text{Br}$ ,  $\text{C}_2\text{H}_5-\text{CH}_3\text{I}$ , etc.; for all these systems, plots of  $\Delta A$  and of the sp. gr. against the compn. in mole fractions are linear, although the viscosity isotherms may show a min. or a max. Linear plots of  $\Delta A$  may be found also with systems of assoc., but chemically close substances, as  $\text{MeOH}-\text{PrOH}$  and  $\text{HCOEt}-\text{AcOH}$ . Very slight deviations from additivity, with consistently neg.  $\Delta A$ , are exhibited by  $\text{C}_2\text{H}_5-\text{CS}_2$ ,  $\text{PhMe}-\text{CS}_2$ ,  $\text{CHCl}_3-\text{CS}_2$ ,  $\text{C}_2\text{H}_5-\text{C}_2\text{H}_5$ ,  $\text{C}_2\text{H}_5-\text{CN}$ ,  $\text{CCl}_4-\text{CHCl}_3$ ,  $\text{C}_2\text{H}_5-\text{H}_2\text{O}$ ,  $\text{C}_2\text{H}_5-\text{CH}_3\text{Br}$ , etc.; very small pos.  $\Delta A$  is found in  $\text{C}_2\text{H}_5\text{Br}-\text{CHCl}_3$  and  $\text{C}_2\text{H}_5-\text{PhI}$ . The 2nd type, with di-

rectly neg.  $\Delta A$ , is exemplified by  $\text{C}_2\text{H}_5-\text{AcOH}$ ,  $\text{CCl}_4-\text{Me}_2\text{CO}$ ,  $\text{CS}_2-\text{Me}_2\text{CO}$ ,  $\text{Et}_2\text{Be}-\text{AcOH}$ ,  $\text{PhMe}-\text{AcOH}$ ,  $\text{CCl}_4-\text{PrOH}$ ,  $\text{Me}_2\text{N}-\text{Me}_2\text{CO}$ ,  $\text{CH}_3-\text{PrOH}$ , etc.; viscometry isotherms of some of these systems may have either a min. or a max., and are, consequently, less informative than the  $\Delta A$  plots. In the 3rd type, the  $\Delta A$  curve consists of 3 branches intersecting at the max.; depending on whether, along a branch,  $\Delta A$  and  $\Delta A$  are symbiot., antithetic, or const., the branch is convex to the axis of compn., concave to it, or rectilinear. One single compnd. is indicated by a singular point, whereas in the case of presence of several compnd., the max. is rounded, as in  $\text{HClO}-\text{H}_2\text{O}$ ,  $\text{HNO}_3-\text{H}_2\text{O}$ ,  $\text{HF}-\text{H}_2\text{O}$ ,  $\text{H}_2\text{SO}_4-\text{H}_2\text{O}$ ,  $\text{H}_3\text{PO}_4-\text{H}_2\text{O}$ ,  $\text{NaH}-\text{H}_2\text{O}$ ,  $\text{H}_2\text{SiO}_3-\text{H}_2\text{O}$ , etc. "Irrational" systems of the 4th type, showing a flat diffuse max., are illustrated by  $\text{PhOH}-\text{PhNH}_2$ ,  $\text{Me}_2\text{CO}-\text{HCOEt}$ ,  $\text{C}_2\text{H}_5(\text{NO}_2)_2-\text{H}_2\text{O}$ , etc. In the systems  $\text{AcOH}-\text{H}_2\text{O}$ ,  $\text{MeOH}-\text{H}_2\text{O}$ ,  $\text{Me}_2\text{CO}-\text{AcOH}$ ,  $\text{PhOH}-\text{Me}_2\text{CO}$ , the max. corresponds to no stoichiometric ratio of the components and to no definite compnd. An S-shaped  $\Delta A$  curve, resulting from the predominance of the dissociat. of an assoc. component along part of the curve, and of compd. formation along another part, is exemplified by the systems  $\text{SbCl}_3-\text{C}_2\text{H}_5$ ,  $\text{SbCl}_3-\text{CH}_3\text{I}$ , and  $\text{SbCl}_3-\text{C}_2\text{H}_5\text{I}$ , where, again, the max. corresponds to no stoichiometric ratio of the components.

N. Thom

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CA

Communication of diagrams in the volume analysis of liquid  
binary systems. K. D. Yatobinskii and I. I. Zaslavskii  
(Ivanovo Inst. Chem. Technol.), J. Gen. Chem. USSR  
20, 413-19 (1950) (Engl. translation). See C.A. 44, 10214  
H. M. H.

1957

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ZASLAVSKIY, I. I.; KLIMOVA, O. M.

Acids, Inorganic

Structure of complexes in the system sulfuric anhydride-nitric anhydride-water.  
Izv. Sekt. plat.i.blag.met. No 26, 1951

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

ZASLAVSKII, I. I.

Zaslavskii, I. I., Klimova, O. M., Gus'kova, L. V.-"Study and classification of compounds in the system sulfur trioxide- nitrogen pentoxide- water." (p. 752)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1952, Vol. 22, No. 5

Chair of Inorganic Chemistry, Ivanovo Chem-Technol. Inst.

In the above liquid system, several compounds of definite chem compn were found having the general formula  $N_2O_5 \cdot 4SO_3 \cdot nH_2O$ . Some of the members of this group were separated in cryst form. Their stability decreases as the coefficient increases, i.e., as the quantity of water in the compd increases. If the coef exceeds 5, this compd does not exist in the liquid state even in partially dissociated form. Attempts were made to classify known individual compds of the series  $N_2O_5 \cdot 4SO_3 \cdot nH_2O$ .

258T14

ZASLAVSKAY, L.I.

(2)

Chemical Abstracts  
Vol. 48 No. 5  
Mar. 10, 1954  
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Study and classification of the compounds in the system  
sulfur trioxide-nitrogen pentoxide-water. L.I. Zaslavskaya,  
O. M. Klimova, and L. V. Gus'kova (Ivanovo Inst. Chem.  
Technol.). J. Gen. Chem. U.S.S.R. 23, 818-19 (1952)  
(Engl. translation).—See C.A. 47, 8835a. H. L. H.

MF  
7-19-54

ZASLAVOKIY, II.

Chemical Abst.  
Vol. 48 No. 9  
May 10, 1954  
General and Physical Chemistry

The absolute contraction constant and the periodic law  
[I. I. Zaslavskii and K. P. Vasil'evskii. *J. Gen. Chem.*  
(U.S.S.R.) 22, 1763-6 (1952) (Engl. translation).—See C.A.  
47, 1998c.] H. L. H.

② Chem  
G-2-53  
gfp

USSR/Chemistry - Analytical Chemistry

JUL 52

"The Use of PbO<sub>2</sub> Electrodes as Indicators for Acid-Basic Reactions," I. G. Shcherbakov, B. M. Lapshin, I. I. Zaslavskiy, Ivanovo Chem Technol Inst

Zhur Prk Khim, Vol 25, No 7, pp 761-766

In investigating the behavior of PbO<sub>2</sub> electrodes in various electrolytes, a change of the potential was noted. It is suggested that this is due to cathodic exchange bet the anode deposit of PbO<sub>2</sub> and the electrolyte soln. Measurement of the pH of solns showed that PbO<sub>2</sub> when reacting with salt solns releases H

263T47

ions into the soln, thus lowering the pH. Investigation of the character of the change of potential of the PbO<sub>2</sub> electrode in various media leads to the conclusion that the electrode is suitable for detn of relative changes of activity of protons in various acid systems.

263T47

ZASLAVSKY, I. I.

USSR/Chemistry - Sulfuric Acid-Nitration ZASLAVSKIY, I. I.

Dec 52

"Outstanding Points on Specific-Gravity Curves for the System Nitric Acid - Oleum,"  
V. A. Ugol'tsova, O. M. Klimova, and I. I. Zaslavskiy, Ivanovskiy  
Chemicotechnological Inst

Zhur Prikl Khim, Vol 25, No 12, pp 1309-1311

The sp gr at 20° for mixts of nitric acid and various concns of oleum were exptlly measured. It was noted that on those parts of the curves corresponding to compns with the greatest number of nitronium hydropyrosulfate molecules there are well expressed bends.

257T32

LYUBIMOVA, V.A.; ZASLAVSKIY, I.I.

Change of composition in the system nitric acid--sulfuric anhydride--  
water during the process of heating. Soob.o nauch.rab.chl.VKHO  
no.3:29-30 '53. (MIRA 10:10)  
(Nitric acid) (Sulfur trioxide) (Water)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8

1. Khim. Obshcheshina iai. Mendeleeva 1953, No. A, 20-304  
2. Periodical Zhur. Khim. 1954 No. 37441, cf. L.4 46, 125107  
3. Periodical Zhur. Khim. 1954 No. 37441, cf. L.4 46, 125107

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8"

AID P - 3753

Subject : USSR/Chemistry  
Card 1/1 Pub. 152 - 17/22  
Authors : Lapshin, B. M., V. A. Usol'tseva, and I. I. Zaslavskiy  
Title : Change in the potential of the PbO<sub>2</sub>-electrode in the system H<sub>2</sub>SO<sub>4</sub>.xSO<sub>3</sub> - HNO<sub>3</sub>  
Periodical : Zhur. prikl. khim. 28, 9, 1009-1012, 1955  
Abstract : The changes of the potential in systems containing various amounts of HNO<sub>3</sub> and of oleum were established and compiled in a table. One table, one diagram, 2 references, 1 Russian (1952).  
Institution : Ivanovo Chemical and Technological Institute  
Submitted : Ja 3, 1954

AUTHOR: Zaslavskiy, I. I., Student 79-28 3-53/61

TITLE: Nuclear Concentration (Atomic Concentration) and the Specific Weights of Hydrocarbons (Yadernaya (atomnaya) kontsentratsiya i udel'nyye vesa uglevodorodov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 811-814 (USSR)

ABSTRACT: The extent of the nuclear concentration (NC) is determined by the sum of all atoms of the elements participating in the structure of the given product per liter of volume ( $NC = AN$ , where A denotes the "exponent of nuclear concentration" and N the Avogadro number). In the case where the chemical formula of the product is determined (whether rationally or empirically is of no importance) the magnitude of the exponent of YaK is determined by the ratio  $A = 1000 \frac{nd}{M}$  (where n denotes the number of atoms in the molecule, d the specific weight and M the molecular weight). According to Mendeleyev this exponent is in close and obvious relation to the conception of the mean atomic volume in composite bodies, i.e. the small-

Card 1/2

Nuclear Concentration (Atomic Concentration) and the Specific 79-28-3-53/61  
Weights of Hydrocarbons

er this mean volume of the atoms the greater is the exponent. From the second equation (2) follows that by using the table the specific weight can be determined for any hydrocarbon of given composition in a unique way when the exponent of YaK is already known. The mean computed values of YaK of the hydrocarbons increase regularly with the increasing atomic number of the hydrogen in the molecule. The majority of hydrocarbons is characterized by such values of YaK at about 20° C which differ from the computed mean values according to YaK by 6% at the utmost. There are 1 table and 3 references, which are Soviet.

SUBMITTED: January 12, 1957

Card 2/2

ZASIAVSKIY, I.I.

Best systems for the automatization of continuous rectification  
columns. Khim.prom. no.81699-704 D '59. (MIRA 13:6)  
(Distillation, Fractional) (Automatic control)

ZASLAVSKIY, I.I.; BLYAKHMAN, L.I.; AIATYRTSEV, L.A.

Self-adjusting system for the automatic determination  
of optimum conditions for the operation of rectification  
columns. Khim.prom. no.3:227-233 Ap-My '60.

(MIRA 13:8)

(Distillation apparatus)  
(Automatic control)

L4244-00 ENTR(1)/ENTR(2)/T/ENR(L)/ETI IJF(e) JD/GG  
ACC NR: AR6024983 SOURCE CODE: UR/0081/66/000/007/E046/E046

AUTHOR: Zaslavskiy, I. I.

TITLE: Crystal structures and molecular volumes of oxides, nitrides, and their analogs

SOURCE: Ref. zh. Khimiya, Part I, Abs. 7B329

REF SOURCE: Uch. zap. Mordovsk. un-t, vyp. 46, 1965, 3-13

TOPIC TAGS: metal compound, molecular volume, ionic crystal

ABSTRACT: The relationship between the crystal structure and molecular volumes ( $V_M$ ) was examined in 205 MX-type compounds, where M is any metal, and X = O, S, Se, Te, N, P, As, Sb, Bi. The maximum values of  $V_M$  for the NiAs(MnP) structural type and minimum values for the NaCl structural type were found. The compounds considered do not obey the rule of limiting ratios of the radii of the component ions. Tables of  $V_M$  values are given for MX-type compounds crystallizing in the NiAs and NaCl structural types. L. Dem'yanets. [Translation of abstract]

SUB CODE: 07

Card 1/1 00

ZASLAVSKIY, I.I., kand.tekhn.nauk

Automatic control of chemical engineering processes using  
gradient modeling and prediction. Zhur.VKHO 6 no.5:482-486 '61.  
(Chemical engineering) (Automatic control)

(MIRA 14:10)

ZASLAVSKIY, I.I.

Self-adjusting systems for automatic scanning of conditions with  
a given inclination of the tangent. .riborostroenie no.11:11-  
15 N '61.  
(Electronic control)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8

ZASLAVSKIY, I.I.

Derived values of internuclear distances in oxides. Uch. zap.  
Mord. gos. un. no.27:12-18 '63. (MIRA 19:1)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8"

ZASLAVSKIY, I.I.; BIRYUKOV, V.V.

Design and calculation of some systems for temperature control  
in some periodic processes. Khim. prom. no.5:376-381 My '64.  
(MIRA 17:9)

ACCESSION NR: AT4042440

S/0000/64/000/000/0087/0089

AUTHOR: Zaslavskiy, I. I., Kaplanskiy, Yu. Ye., Potepalov, Yu. N.

TITLE: Pneumatic controller with a variable circuit

SOURCE: Vsesoyuznoye soveshchaniye po pnevmo-gidravlicheskoy avtomatike. 5th, Lenin-grad, 1962. Pnevmo- i gidroavtomatika (Pneumatic and hydraulic control); materialy\*. soveshchaniya. Moscow, Izd-vo Nauka, 1964, 87-89

TOPIC TAGS: automation, automatic control system, pneumatic control system, pneumatic regulator, variable circuit regulator, temperature control, programmed temperature control

ABSTRACT: The problem of automatic programmed control of the temperature conditions in a periodic chemical reactor is a fundamental one, the solution of which is necessary for the automatization, for example, of the dyestuffs industry. Earlier work using electronic simulation (I. I. Zaslavskiy, A. Ya. Biryukov, Sistemy\* regulirovaniya periodicheskikh protsessov s izmenyayushchoysya strukturnoy skhemoy. Avtomatizatsiya khimicheskikh proizvodstv, 1960, No. 3), in which an attempt was made to synthesize a

Card 1/3

ACCESSION NR: AT4042440

new, more effective, control algorithm, revealed good prospects for the use of controllers with logical elements and variable structures. The present paper is devoted to a test of the results of electronic simulation on an experimental industrial control installation making use of zoned logic. A block diagram of this control system is shown in the Enclosure. The controller described in this paper can be used successfully for programming the control of periodic processes. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 29Jan64

ENCL: 01

SUB CODE: IE

NO REF SOV: 002

OTHER: 000

Card 2/3

ACCESSION NR: AT4042440

ENCLOSURE: 01

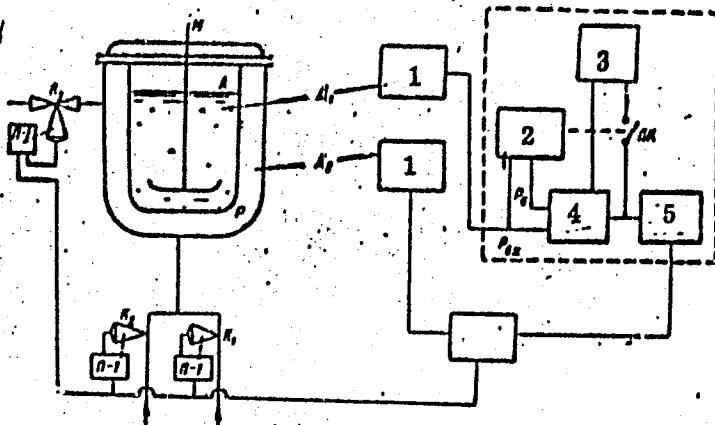


Fig. 1. Block diagram of a programmed control system. 1 - a device, the output of which depends linearly on the deviation of the input from the program, this being a function of time; 2 - logic block, incorporating the integral portion in the programmed zone; 3 - integral portion of the AUS 4RB-32B block; 4 - BP-28V leading block; 5 - 4RB-32B block, in the integral portion of which the artificial null pressure is applied; K<sub>1</sub> and π-1 - water value and positioner; K<sub>2</sub> and n-1 - steam value and positioner; K<sub>3</sub> and n-1 - exhaust valve and positioner; A - apparatus; P - jacket; M - stirrer; K - pneumocontact.

Card 3/3.

SIDENKO, V.I., inzh.; MOSTAKOV, V.I., inzh.; ZASIAVSKIY, I.N., inzh.; OL'GIN,  
A.Ya., inzh.; SOTSKOVA, S.D., inzh.

Durability of the structural elements of the main buildings of  
sintering plants. Prom.stroi. 42 no.11:35-37 N '64.

(MIRA 18:8)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'-  
nyy institut promyshlennykh zdaniy i sooruzheniy i Khar'kovskiy  
Promstroyniiproyekt.

ZASLAVSKIY, I.N., inzh.; ZHUK, G.S., inzh.

Investigation of deformations of contraction and creep of concrete during prolonged heating. Stroi.konstr. no.2:127-136 '65.  
(MIRA 18:12)

1. Khar'kovskiy PromstroyNIIproyekt.

ZASLAVSKIY, J. [Zaslavskiy, I.S.]; SOR, G.I. [Shor, G.I.];  
SNEJEROVA, R.N. [Smeyerova, R.N.]

Radio indicator research on the mechanism of action of  
anticorrosion and antiseizing additives to lubricating  
oils. Ropaa uhlje 6 no.5:130-135 My '64.

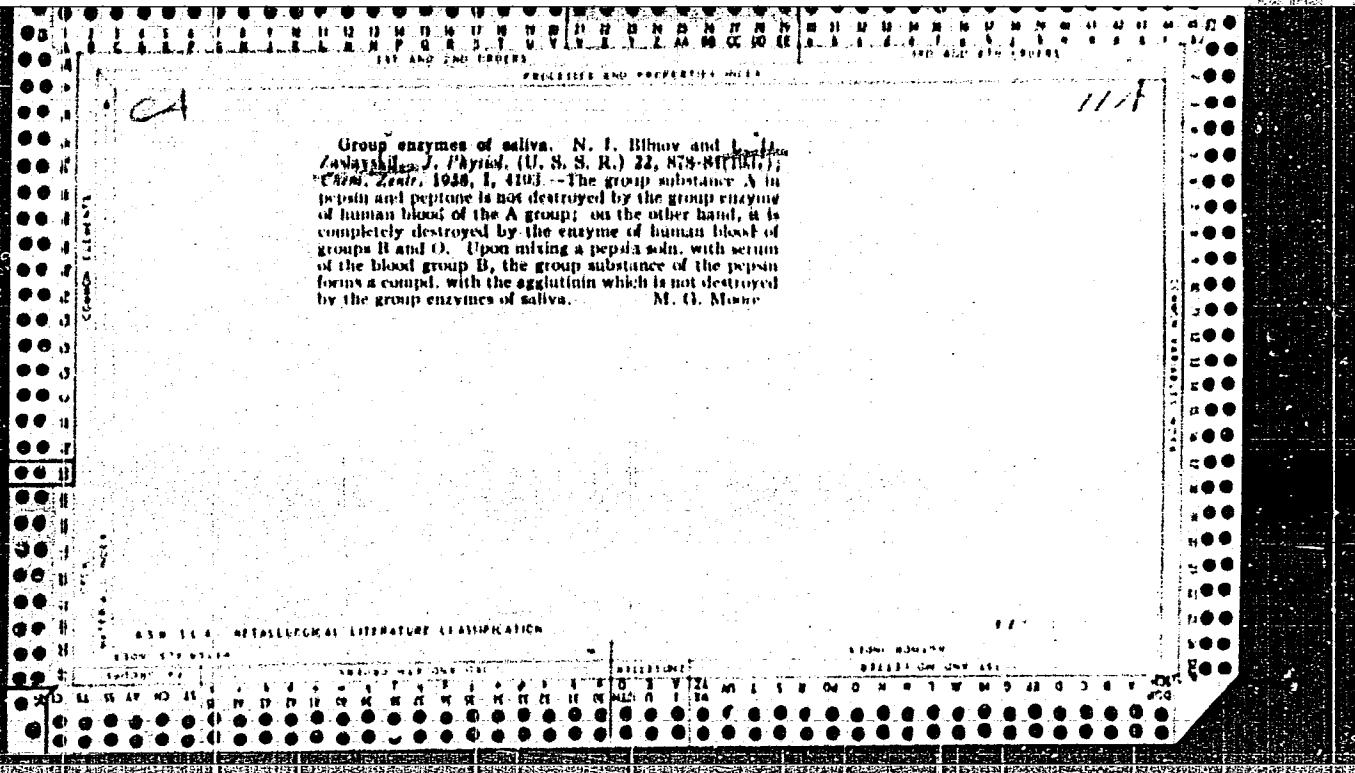
1. All-Union Scientific Research Institute for the Pro-  
cessing of Petroleum and Gas and for the Production of  
Synthetic Liquid Fuel.

ZASLAVSKIY, L., prepodavatel'.

Study of modern technology. Prof.-tekhn. obr. 15 no.4:16 Ap '58.  
(MIRA 11:5)

1. Zheleznodorozhnoye uchilishche No.1, Chernovtsey.  
(Technical education—Congresses)

Country : USSR  
CATEGORY : General Problems of Pathology. Tumors. Comparative Oncology  
ABSTRACT JOUR. : RZBiol., No. 12 1958, No. 50423  
AUTHOR : Kislavetskiy, S.B., Bagryanskiy, I.P., Anfimova, N.  
INST. :  
TITLE : The X-Ray Therapy of Cancer of the Lower Lip  
  
ORIG. PUB. : Vesta. Rentgenol. i Radiol., 1956, No.3, 51-54  
  
ABSTRACT : Results are reported on the X-ray treatment of cancer of the lower lip in stages I, II, and III in 77 patients with observation times up to 3 years. Treatment was carried out over long periods of time with the fractional dose method, under the following conditions: 120 kV, filter 0.5 mm Cu + 1 ml Al, skin-focal distance 30 cm. Total doses were 3000-10,000 r in divided doses of 250-350 r. Some patients, in 1.5-7 months, received a second course of prophylactic X-irradiation. Regional lymph nodes were not removed in all patients. The authors believe this method of treatment of cancer of the lower lip is effective. --  
I.T.Kramorenko  
1/1



ZASLAVSKIY, L. D.

"Human Isohemolysins," in the book: Sovremennyye problemy hematologii i perelivaniya krovi (Modern Problems of Hematology and Blood Transfusion), 17-18, 16-36, 1940

ZASLAVSKIY, L. D.

33033. ZASLAVSKIY, L. D., and E. Y. SHIMAKOVSKAYA. Arteriografia pri otmrozhennii u cheloveka. (Khirurgiya, 1945, no. 2, p. 30-33, 4 illus. on plate)  
*Title tr.:* Arteriography in frostbite of man.

Contains an account of the blood vessels based on X-ray arteriograms of the normal hand and foot, of such with second and third degree frostbite, and those with fourth degree frostbite.

*Copy seen:* DSG.

ZASLAVSKIY, L.D.; ABRIKOSOV, S.Ih.

~~Arteriography in spontaneous gangrene during life. Vest. khir. 71 no.1:  
32-34 1951.~~  
(CLML 20:8)

I. O. of the Faculty Surgical Clinic (Head--L.D. Zaslavskiy), Arkhangel'sk  
State Medical Institute (Director--S.M. Gil'denskiol'd).

1. ZASLAVSKIY, L. D., Prof.
2. USSR (600)
4. Intestines - Obstructions
7. Surgical therapy in acute obstruction of the small intestines, Vest. khir., 73, no. 2, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ZASLAVSKIY, L.D., professor,

Surgery of goiter. Probl. endokr. i gorm. 1 no. 2:93-94 Mr-Ap  
"55. (GOITER, surgery)

ZASLAVSKIY, L.D., professor; BOGRYANSKIY, K.P.; ANFIMOVA, N.D.(Arkhangel'sk )

Roentgenotherapy of cancer of the lower lip. Vest.rent. i rad. 31  
no.3:31-34 My-Je '56. (MIRA 9:9)

(LIPS, neoplasms,  
radiother. (Rus))  
(RADICAL THERAPY, in various diseases,  
cancer of lip (Rus))

ZASLAVSKIY, L.D., prof.

Ultraviolet irradiation of blood according to Pototskaia's method for  
detection of pulmonary cancer. Zdrav. Belor. 5 no.11:11-13 N '59.  
(MIRA 13:3)

(ULTRAVIOLET RAYS)

(CANCER)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8

ZASIAVSKIY, L.D., prof.

Acute appendicitis in pregnancy. Zdrav. Belor 5 no.4:27-29 Ap '59.  
(APPENDICITIS) (PREGNANCY, COMPLICATIONS OF) (MIRA 12:?)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8"

ZASLAVSKIY, L.D., prof.

Diagnostic errors in acute appendicitis in pregnancy [with summary  
in English]. Akush. i gin. 35 no.1:55-57 Ja-F '59. (MIRA 12:2)

I, Is fakul'tetskoy khirurgicheskoy kliniki (zav.- prof. L.D. Zas-  
lavskiy) Vitebskogo meditsinskogo instituta,

(PREGNANCY compl.

appendicitis, diag. errors (Rus))

(APPENDICITIS, in pregn.

diag. errors (Rus))

I 27267-66 EWT(1)/ETC(m)-6/ETC(f)/ENG(m)/T-2 KW  
ACC NR: AP6009553 (A) SOURCE CODE: UR/0413/66/001/005/0102/0102

AUTHORS: Zaslavskiy, L. I.; Yemel'yanov, I. V.; Korotayev, S. V.

56  
B

ORG: none

TITLE: Device providing a constant pressure drop between auxiliary and main fuel tanks. Class 47, No. 179564

SOURCE: Izobreteniya, promyshlennyye obraztay, tovarnyye znaki, no. 5, 1966, 122

TOPIC TAGS: fuel tank, fuel system equipment, pressure regulator

ABSTRACT: This Author Certificate presents a device providing a constant pressure drop between auxiliary and main fuel tanks. The device consists of a safety valve, a regulated throttle, and an under-inflatable auxiliary fuel tank. To provide for a preset pressure drop between the auxiliary and main fuel tanks, the air space of the auxiliary tank is connected into the main air pressure line in parallel with the regulated throttle (see Fig. 1). The safety valve is placed after the regulated throttle.

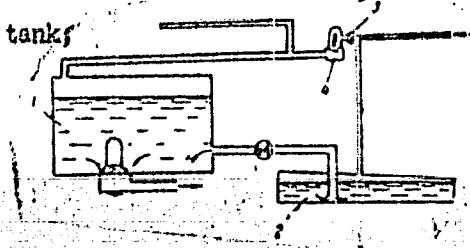
Card 1/2

UDC: 621.646

L 27267-66

ACC NR: AF6009553

Fig. 1. 1 - auxiliary fuel tank; 2 - main tanks  
3 - throttle; 4 - valve.



Orig. art. has: 1 diagram.

SUB CODE: 13/ SUBM DATE: 18Apr64

Card 2/2 C0

TSAREV, Boris Mikhaylovich; ZASLAVSKIY, L.P., red.; FRIDKIN, A.M.,  
tekhn. red.

[Calculation and design of electron tubes] Raschet i kon-  
struirovaniye elektronnykh lamp. Izd.2., perer. i znachitel'-  
no dop. Moskva, Gos. energ. izd-vo, 1961. 671 p.  
(MIRA 15:2)

(Electron tubes)

ZASLAVSKIY, M.; AGEYEV, V., tekhnik; SANTANEYEV, V., elektromonter

Training specialists. Avt.transp. 41 no.11:52-53 N 163.  
(MIRA 16:12)

1. 1-y gruzovoy avtopark Leningradskogo avtomobil'nogo  
upravleniya (for Santaneyev).

ZASLAVSKIY, M.

KANDEROR, M.; ZASLAVSKIY, M.

Cooperative loading and unloading of trucks. Sots.trud no.6:124-125  
Je '57. (MLRA 10:7)

1. Nachal'nik otdela truda i zarabotnoy platy konditerskoy  
fabriki "Bol'shevik" (for Kanderor). 2. Nachal'nik tsekha.  
(Loading and unloading)

ZASLAVSKIY, M.A.  
OSTROVITYANOV, Emiliy Mikhaylovich; IVANOV, Boris Yakovlevich;  
AFANAS'YEV, A.A.,retsenzent; ZASLAVSKIY, M.A.,retsenzent; SHVETSOVA,  
T.P.,retsenzent; TSVAYGENBAUM, B.M.,retsenzent; MELIESET'YAH, M.A.,  
retsenzent; MINAYEVA, T.M.,redaktor; POPOVA, T.G.,tekhnicheskiy  
redaktor

[Technology of footwear; assembling uppers, molding, sewing and  
finishing processes] Tekhnologiya obuvi; sborka zagotovok,  
formovochnye, poshivochnye i otdelochnye protsessy. Moskva, Gos.  
nauchno-tekhn. izd-vo M-va legkoi promyshl. SSSR, 1956. 391 p.  
(MLRA 10:5)

(Shoe industry)

ZASLAVSKIY, M.A., inzh.

Using the method of assembled reinforced uppers in manufacturing  
shoes at the "Birevestnik" Plant. Issg.prom. 18 no. 7; 48-51 Jl. '58.  
(MIRA 11:9)

(Shoe manufacture)

TIKHONOV, Aleksandr Porfir'yevich; ZASLAVSKIY, Moisey Abramovich;  
BESPALOV, K. I., kand.tekhn.nauk, retsenzent; GEL'FGAT, Z.I.,  
inzh., retsenzent; DASHEVSKIY, T.B., kand.tekhn.nauk, red.;  
FURER, P.Ya., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[Technology of machinery manufacture] Tekhnologija mashino-  
stroeniia. Moskva, Mashgiz, 1963. 532 p. (MIRA 16:6)  
(Machinery industry)

ZASLAVSKIY, Mikhail Abramovich; NAUMOV, D.V., otv. red.

[New method of preparing stuffed animals; sculputral taxidermy] Novyi metod izgotovleniya chuchel zhivotnykh; skul'pturnaya taksidermiia. Moskva, Nauka, 1964. 202 p.  
(MIRA 17:9)

1. Zaveduyushchiy Zoologicheskim muzeuem AN SSSR (for Naumov).

1. ZASLAVSKIY, M. A.
2. USER (600)
4. Machine Tools
7. Cutting of rack teeth for three-jaw chuck. Stan. i instr. 24, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, MAY 1953. Unclassified.

ZASLAVSKIY, M.L.

BEDEL', Vladimir Konstantinovich, inzh.; OKUNEVA, A.I., inzh., vedushchiy  
red.; ZASLAVSKIY, M.L., inzh., red.; PONOMAREV, V.A., tekhn.red.

[New method of casting of large thin-walled light alloy parts  
under low pressure] Novyi sposob otlivki krupnogabaritnykh tonko-  
stennykh detalei iz legkikh splavov pod nizkim davleniem. Moskva,  
Filial Vses.in-ta nauchnoi i tekhn.inform., 1956. 15 p.  
(Informatsiya o nauchno-issledovatel'skikh rabotakh. Tema 2,  
no. I-56-219) (MIRA 10:12)

(Die casting)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8

ZASIAVSKIY, M.L.

Standardization of casts in pressure casting. Standartizatia no.6:79-  
83 N-D '56.  
(Die casting--Standards)

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R001963910013-8"

ZASLAVSKIY, M.L., inzhener.

Mechanization and automatization of industrial processes in  
founding under pressure. Lit. proizv. no. 8:15-18 Ag '56.  
(MLRA 9:10)

(United States--Die casting)

ZASLAVSKIY, M.L., inzhener.

Optimum design of cotter pins in dies for casting under pressure.  
Lit. proizv. no.8:31 Ag '56. (MLRA 9:10)

(Die casting)

ZASLAVSKIY, M.L., inzhener.

Dies of new design for die casting. Lit.proizv. no.11:10-13 N 156.  
(MIRA 10:1)

(Die casting)

ZASLAVSKIY, M.L.

ZASLAVSKIY, M.L.

Using aluminum and magnesium alloys for die casting in the  
automobile industry. Avt.i trakt.prom. no.10:42-45 O '57.

(MIRA 10:12)

(Aluminum founding) (Magnesium founding)

25(1)

PHASE I BOOK EXPLOITATION

SOV/1557

Zaslavskiy, Mikhail Leybovich

Lit'ye pod davleniyem armirovannykh i rez'bovykh detaley (Pressure Die Casting of Reinforced and Threaded Parts) Moscow, Mashgiz, 1958. 163 p. 6,500 copies printed.

Reviewer: Moskvin, P.P., Engineer; Ed.: Lupanov, B.P., Engineer;  
Ed. of Publishing House: Molyukov, G.A., Engineer; Tech. Ed.:  
Tikhanov, A.Ya.; Managing Ed. for Reference Literature: Krylov, V.I.

PURPOSE: This book is intended for designers and technologists at machine-building plants. It may also be useful to teachers and students at higher technical schools.

COVERAGE: The book is divided into two chapters. Chapter I gives basic principles for designing reinforced castings having various types of inserts. The possibilities of reinforcement as a means of improving mechanical properties and of providing special magnetic and electrical properties are discussed. The assembly of small-size cast parts into units is described. Chapter II deals with designing of threaded castings and molds for casting parts having internal and external threads,  
Card 1/5

Pressure Die (Cont.)

SOV/1557

including standard (interchangeable) parts. Special features of vacuum casting are discussed, and ways of mechanizing production processes are indicated. The following personalities are mentioned for their contributions in this field: V.A. Penkin, V.Ye. Sinil'-nikova, L.I. Vinberg, G.F. Lobanov, and S.A. Kireyev. There are 12 references, of which 4 are Soviet, 7 English, and 1 is German.

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Card 2/5

## Pressure Die (Cont.)

SOV/1557

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Card 5/5

AUTHOR: Zaslavskiy, M.L., Engineer SOV-128-58-7-3/20

TITLE: Die Casting in a Vacuum(Vakuumnoye lit'ye pod davleniem)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 7, pp 6-8 (USSR)

ABSTRACT: The article presents general information in digest form on existing methods of die casting in a vacuum and the advantages thereof in comparison with the common die casting. The 4 existing methods of pumping out air are described and illustrated: 1) from the mold only; 2) from the mold and the pushing pedestal; 3) from the entire space between the mold-holding plates; 4) from the casing enclosing the mold and the entire mobile portion of the die casting machine. Pusher design employed for vacuum die casting machines in series production at the present time is described and il-

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Die Casting in a Vacuum

SOV-128-58-7-3/20

Illustrated by drawing (Fig. 5b). The principle of the US (Prentis) vacuum die casting machines is also described. There are 6 diagrams.

1. Die casting--Equipment
2. Die casting--Effectiveness
3. Vacuum systems--Applications

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ZASLAVSKIY, M.L., inzh.

Modern die-casting machines. Vest. mash. 38 no.4:80-83 Ap '58.  
(Die casting) (MIRE 11:3)

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ZASLAVSKIY, M.I.

Modern chill-molding units. Biul.-tekh. ekon. inform. Gos.  
nauch.-issl. inst. nauch. i tekhn. inform. 17 no.3:90-93 '64.  
(MIRA 17:9)

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Alloys for casting in metal molds. Biul. tekhn.-ekon. inform.  
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AUTHOR: Belopukhov, A. K. (Candidate of technical sciences, Docent); Zaslavskiy, M. L. (Candidate of technical sciences)

ORG: None

TITLE: Theoretical calculation of the injection time in die casting reinforced parts

SOURCE: IVUZ. Mashinostroyeniye, no. 11, 1965, 150-156

TOPIC TAGS: die, pressure casting, metal casting, thermal conduction, heat balance

ABSTRACT: The authors present the theoretical basis for the calculation of injection time in die casting reinforced parts. Three cases of reinforcements are considered:  
1. where the contact surface between the liquid metal and the core does not differ significantly from the contact surface of the liquid metal and the walls of the die and the thermal conductivity coefficient of the core is close to or near the thermal conductivity coefficient of the die; 2. where the core is surrounded by molten metal and the thermal conductivity of the core is equal to or less than the thermal conductivity of the die material; 3. where the thermal conductivity of the core material significantly exceeds the thermal conductivity of the die material. Differential equations for the thermal balance between molten metal, the core and the die have been

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worked out for each of these cases. Rules governing the variation of the thermal conductivity coefficients for various conditions of reinforcement have been worked out as a function of heat exchange intensity. Formulas are provided for engineering computation. Orig. art. had: 15 formulas.

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